

# Health Care Spending and the Medicare Program: A Data Book

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# HEALTH CARE SPENDING AND THE MEDICARE PROGRAM: A DATA BOOK

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## CHAPTER 1

# NATIONAL HEALTH CARE SPENDING

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The dominant trend in national health care spending in the 1990s has been slowing growth in nearly all sectors of care. This chapter illustrates the currents underlying this trend.

The chapter begins by tracking aggregate health spending over time. Since a period of large spending increases in the late 1980s and early 1990s, growth has slowed considerably. Private insurer pressure on providers to cut costs, along with policy reform in the public sector, has resulted in the slowest rate of growth in health spending in decades. Changes in the flow of health spending over time are shown both by payment source, such as private insurance and Medicare, and by the mix of services purchased.

Next, the chapter compares Medicare spending with that by the private sector and other government health programs. The Medicare program is responsible for one-fifth of all health spending, and is the largest single payer. Although spending on ambulatory and post acute services has risen rapidly in the program, inpatient hospital services still account for more than half of all Medicare spending. The change in Medicare payment to hospitals, and the effects on hospitals and other public and private payers are shown in some detail.

Finally, the chapter illustrates recent trends in the employment-based insurance market. Most prominent among these is the recent drop in the number of employees enrolled in traditional indemnity insurance plans and the rapid growth in enrollment in various types of managed care plans. The proportion of employees without health insurance has remained steady since the early 1990s, despite a sustained economic expansion since 1992.

**Chart 1-1. Change in Total and Per Capita National Health Spending, 1980-1996**

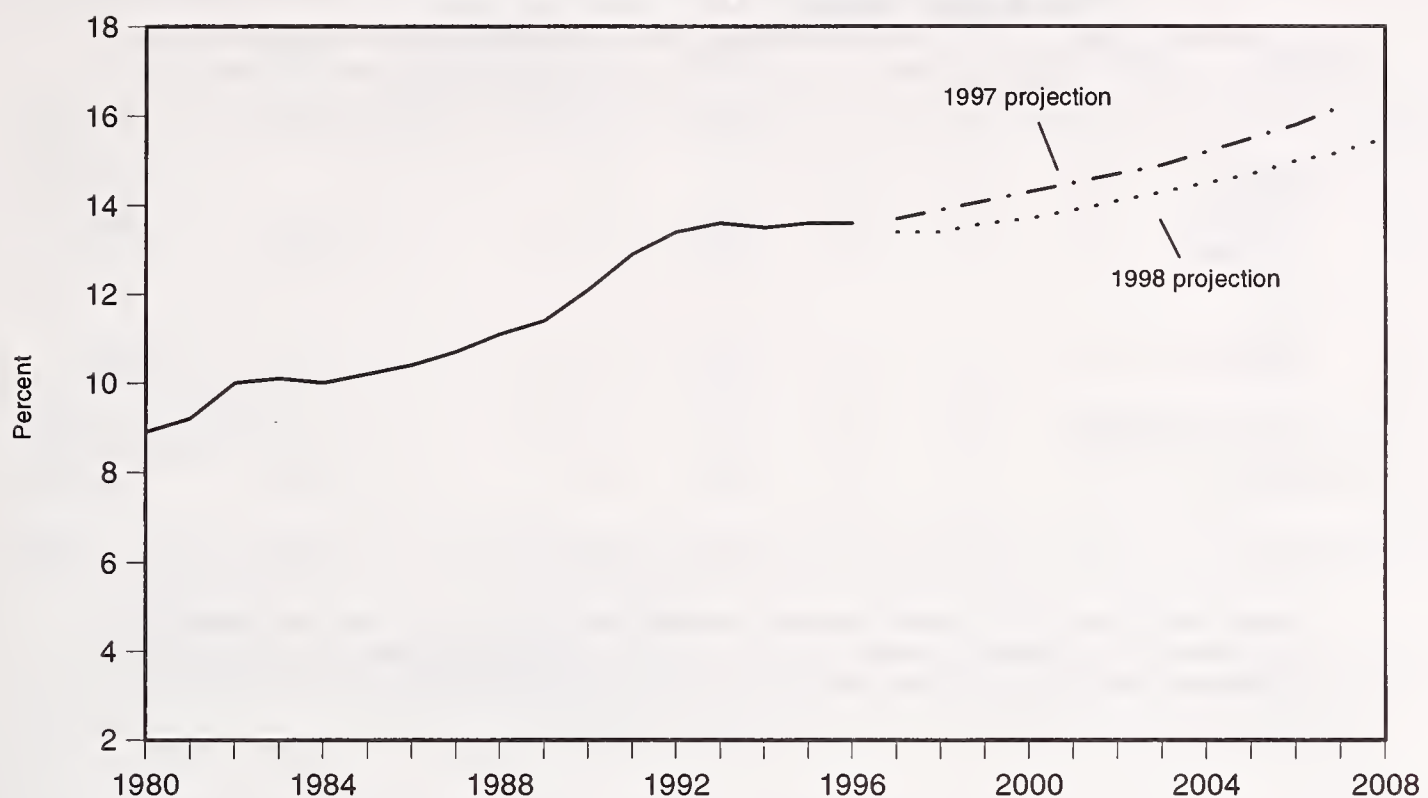
Year	Total Spending		Per Capita Spending	
	Nominal	Real	Nominal	Real
Average annual change				
1980-1992	10.7%	5.9%	9.6%	4.8%
1992-1996	5.5	2.6	4.5	1.6
Annual change				
1990	12.2	6.4	10.9	5.2
1991	9.6	5.2	8.4	4.0
1992	9.1	5.9	8.3	5.1
1993	7.0	3.9	5.8	2.7
1994	5.6	3.0	4.9	2.2
1995	4.8	1.9	3.7	0.8
1996	4.4	1.4	3.6	0.7

NOTE: Real spending is adjusted by the consumer price index for all urban consumers (CPI-U-X1).

SOURCE: Health Care Financing Administration, Office of the Actuary.

In 1996, national health spending continued a pattern of slow growth, increasing 4.4 percent, or only 0.7 percent in real (inflation-adjusted) dollars per capita. The average annual change in nominal spending from 1992 to 1996 has been only about half that of the period 1980 to 1992. Payment pressure by employers on insurers, and, in turn, insurer pressure on providers to lower costs and constrain service use has resulted in the slowest health spending growth in decades.

**Chart 1-2. National Health Spending as a Percent of Gross Domestic Product, 1980-2008**



SOURCE: Health Care Financing Administration, Office of the Actuary.

Lower health expenditure growth has leveled the health sector's share of the economy in recent years. In the late 1980s and early 1990s, the portion of national income devoted to health care increased rapidly. Health costs and spending ballooned as the general economy grew very slowly in these years. By 1992, health care accounted for 13.4 percent of economic activity, up from 8.9 percent in 1980.

After 1992, however, health care's share of GDP has remained about the same, reaching 13.6 percent in 1996. While that share is forecast to climb gradually in the future, the Balanced Budget Act of 1997, along with other changes, lowered these estimates.

**Chart 1-3. Share of National Health Spending, by Sector, 1980 and 1996**

Sector	1980	1996
Total	100.0%	100.0%
Hospitals		
Community		
Inpatient	30.1	21.0
Outpatient	4.5	9.9
Other		
Non-community <sup>a</sup>	3.3	1.5
Federal	3.6	2.3
Skilled nursing facilities	7.1	7.6
Home health agencies	1.0	2.9
Physicians	18.3	19.5
Other <sup>b</sup>	32.1	35.3

<sup>a</sup> Includes patient care spending in long-term care and psychiatric hospitals.

<sup>b</sup> Includes personal care spending (dental services, other professional services, drugs and other medical non-durables, vision products and other medical durables), research, construction, government public health activities, administration of public programs, and net cost of private health insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Since 1980, the share of spending on inpatient hospital services has decreased substantially, from 30.1 percent to 21.0 percent in 1996. By contrast, the outpatient hospital share has more than doubled, from 4.5 percent in 1980 to 9.9 percent in 1996. Additionally, fueled by Medicare payment policies, the share of home health spending has nearly tripled since 1980. These shifts reflect the adoption of prospective payment methods in inpatient hospital services, hospital cost cutting, and the change in technologies and medical practice patterns that allow for substitution from inpatient care to less expensive settings.



**Chart 1-4. Change in National Health Spending, by Sector, 1980-1996**

Sector	Average Annual Percent Change		Annual Change						
	1980-1992	1992-1996	1990	1991	1992	1993	1994	1995	1996
Hospitals	9.5%	4.1%	10.7%	10.1%	8.2%	5.8%	3.9%	3.3%	3.4%
Community	10.0	4.5	11.3	10.8	9.1	6.3	4.4	3.6	3.7
Inpatient	8.4	2.6	9.1	8.4	7.0	5.0	2.3	1.5	1.3
Outpatient	16.7	9.4	18.9	18.3	15.3	9.8	9.9	8.7	9.2
Other									
Non-community <sup>a</sup>	6.3	-2.7	5.6	0.6	-1.7	-3.0	-3.0	-2.0	-2.7
Federal <sup>b</sup>	7.2	3.9	8.9	10.4	4.8	6.4	3.0	2.3	3.8
Skilled nursing facilities	11.1	5.9	11.2	12.2	9.0	6.5	6.8	6.2	4.3
Home health agencies	19.1	11.4	19.6	22.4	22.3	16.5	12.2	10.9	6.2
Physicians	12.0	3.5	12.5	10.5	5.8	4.4	3.7	3.1	2.9
Other <sup>c</sup>	10.5	7.8	14.1	7.1	9.8	9.5	7.9	6.7	6.2

<sup>a</sup> Includes patient care spending in long-term care and psychiatric hospitals.

<sup>b</sup> Includes spending in federal hospitals (Department of Defense, Veterans Affairs, and the Public Health Service).

<sup>c</sup> Includes personal care spending (dental services, other professional services, drugs and other medical non-durables, vision products and other medical durables), research, construction, government public health activities, administration of public programs, and net cost of private health insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary.

The trend of lower expenditure growth in recent years is reflected in all sectors of the health care market. The average annual change in spending for 1992-1996 is lower than for 1980-1992 across all sectors. For 1996, growth in home health spending was down more than 4 percentage points, continuing a trend of deceleration, while spending on federal and outpatient hospital services accelerated.

**Chart 1-5. Change in National Health Spending by Payment Source, 1980-1996 (In Percent)**

Payment Source	Average Annual Change		Annual Change						
	1980-1992	1992-1996	1990	1991	1992	1993	1994	1995	1996
Medicare	15.1%	9.5%	9.5%	10.9%	13.7%	8.2%	11.0%	10.6%	8.1%
Medicaid	15.5	8.5	21.1	24.6	13.2	13.4	8.6	7.1	5.3
Other government programs <sup>a</sup>	10.2	4.5	10.8	6.7	7.2	4.2	6.7	3.2	4.1
Private	11.9	3.7	11.8	7.2	7.4	5.9	3.1	2.8	3.0
Health insurance <sup>b</sup>	14.0	4.5	14.5	8.7	8.9	7.4	4.0	3.6	3.2
Out of pocket <sup>c</sup>	9.1	1.8	8.4	5.0	5.2	2.6	0.8	1.1	2.7
Other <sup>d</sup>	11.0	4.8	8.0	6.2	5.8	8.7	5.4	3.1	2.0

<sup>a</sup> Includes Departments of Defense and Veterans Affairs; Public Health Service; federal research; federal, state, and local workers' compensation; subsidies to hospitals; and public health activities.

<sup>b</sup> Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

<sup>c</sup> Includes all payments (other than premiums) by individuals, such as deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

<sup>d</sup> Includes industrial in-plant health services, private donations, other provider non-patient revenues, and privately financed construction.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

The trend of lower spending growth through the 1990s also appears across payers. Notable is the slowing of extremely high Medicaid growth from the early 1990s. In addition, the power of employers to control health benefit costs is partially seen in the substantially lower average annual spending growth in private health insurance, from 14.0 percent for 1980-1992 and 4.5 percent for 1992-1996.

**Chart 1-6. Share of National Health Spending, by Payment Source, 1980 and 1996**

Payment Source	1980	1996
All	100.0%	100.0%
Medicare	15.2	19.6
Medicaid	10.6	14.3
Other government programs <sup>a</sup>	16.6	12.8
Private health insurance <sup>b</sup>	28.2	32.6
Out of pocket <sup>c</sup>	24.4	16.5
Other <sup>d</sup>	5.0	4.2

<sup>a</sup> Includes Departments of Defense and Veterans Affairs; Public Health Service; federal research; federal, state, and local workers' compensation; subsidies to hospitals; and public health activities.

<sup>b</sup> Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

<sup>c</sup> Includes all payments (other than premiums) by individuals, such as deductibles and copayments when not covered by supplemental insurance.

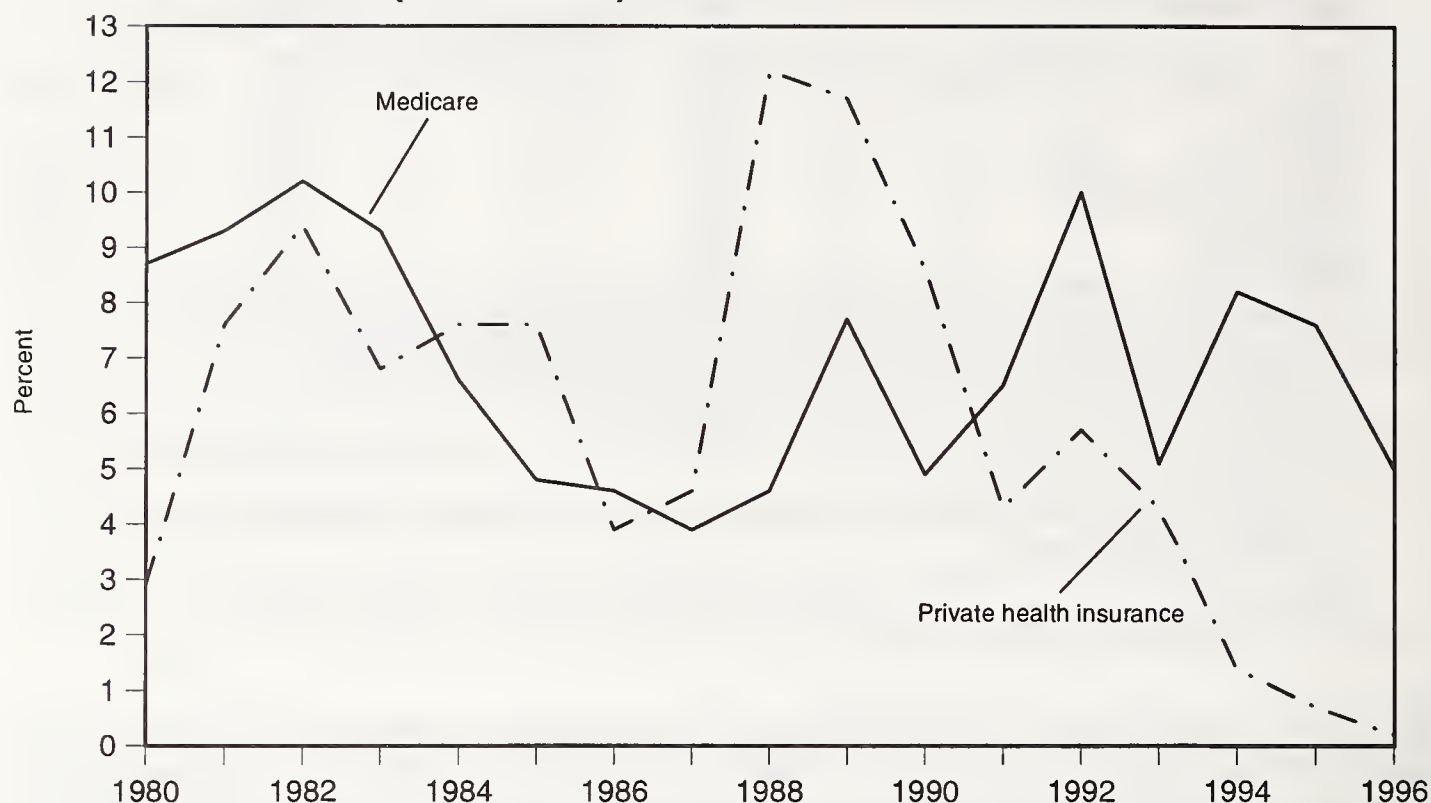
<sup>d</sup> Includes industrial in-plant health services, private donations, other provider non-patient revenues, and privately funded construction.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

The share of national health expenditures devoted to the Medicare program has grown from 15.2 percent in 1980 to 19.6 percent in 1996. A number of factors have contributed to Medicare's relative growth, such as an increase in the aged population and greater use of home health and nursing facility services. The share of private health insurance has also risen from 28.2 percent to 32.6 percent in that same time, despite cost containment and some contraction of employer-sponsored insurance. By contrast, the share of private out-of-pocket spending has declined markedly, possibly due to an increase in managed care plans, which typically have lower total copays and deductibles than indemnity plans.



**Chart 1-7. Real Change in Per-Enrollee Medicare and Private Health Insurance Spending, 1980-1996 (In Percent)**



NOTE: Real spending is adjusted by the consumer price index for all urban consumers (CPI-U-X1). Spending includes personal health care plus program administration or net cost of private health insurance.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

The measure of real per capita change in spending filters the effects of general inflation and changes in the number of people with Medicare or private health insurance. In the mid-1980s, Medicare's adoption of prospective payment for hospitals and the trend of site of care substitution away from inpatient care brought lower spending increases. By the late 1980s, unrestrained cost growth in indemnity-type insurance and cost-shifting from public programs resulted in large spending increases in private insurance, in double digits in 1988 and 1989. Into the 1990s, however, cost cutting and the adoption of managed care methods have resulted in real per capita spending declines in private insurance of -0.7 percent in 1995 and -0.2 percent in 1996. With large portions of the Medicare program still on a fee-for-service payment basis and payments to risk plans linked to fee-for-service growth, Medicare's spending slowdown has not been as dramatic. The 1996 increase was 5.0 percent. However, the trend in Medicare spending has been more stable over the longer term.

**Chart 1-8. Average Annual Real Spending Growth in Medicare and Private Health Insurance by Sector, 1980-1996 (In Percent)**

Years	Payer	Hospital	Nursing Facility	Home Health Agency	Physician	Other
1980-1990	Medicare	5.1%	15.5%	11.4%	8.7%	10.0%
	Private health insurance	0.5	19.8	13.6	9.4	11.4
1990-1992	Medicare	9.2	22.3	35.5	-0.2	13.3
	Private health insurance	1.1	9.5	0.9	9.9	0.5
1992-1996	Medicare	4.5	24.7	19.5	5.1	9.8
	Private health insurance	-0.6	8.1	-0.2	1.2	4.4

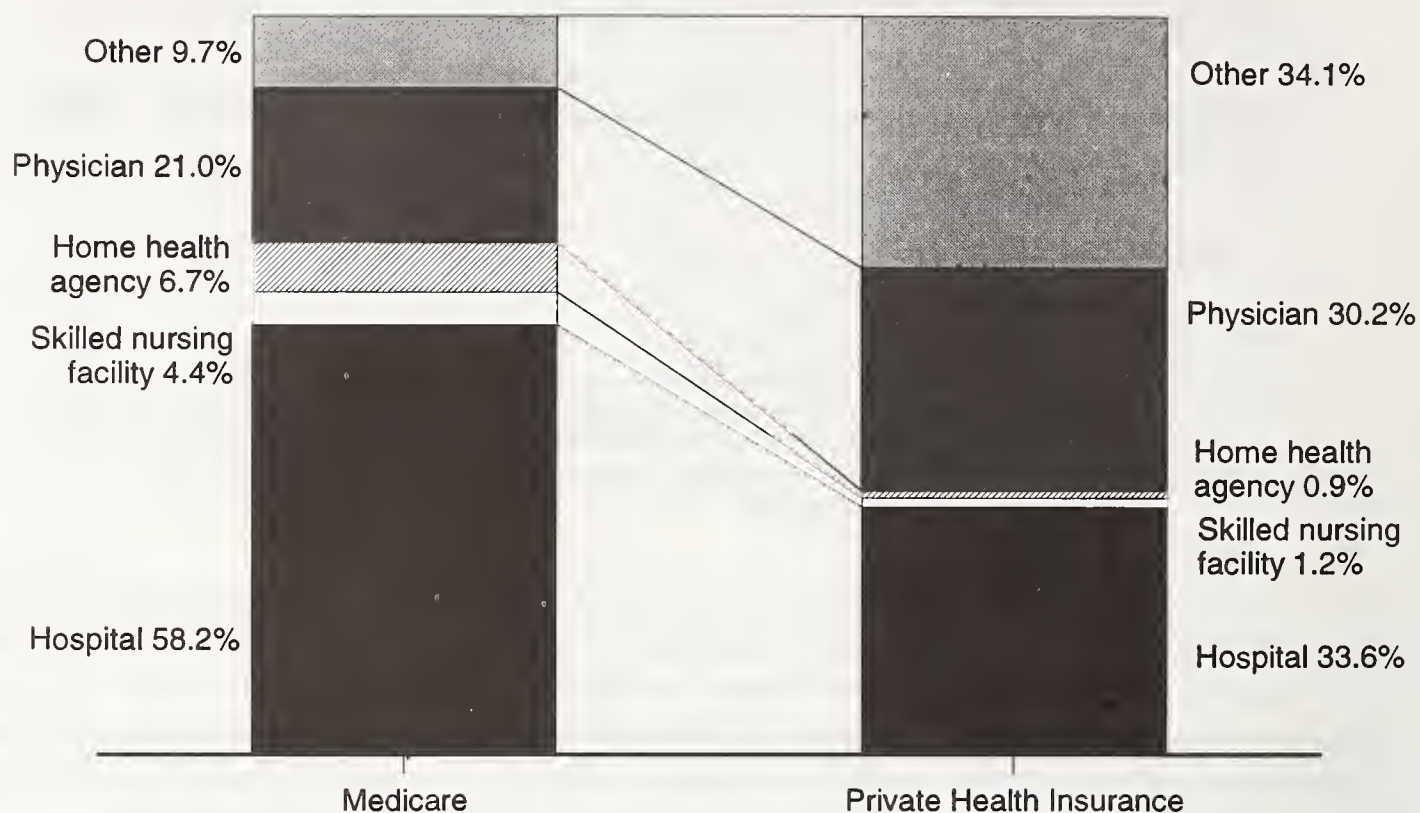
NOTE: Real spending is adjusted by the consumer price index for all urban consumers (CPI-U-X1). Spending includes personal health care plus program administration or net cost of private health insurance.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

The average annual real change in spending on hospital services by private insurers was -0.6 percent between 1992 and 1996. Medicare policy changes brought an increase in demand for post acute care services in nursing facilities and home health agencies, resulting in extremely fast growth, of 22.3 and 35.5 percent, respectively, between 1990 and 1992. By contrast, private insurers' spending on these providers is much less extensive and grew much more slowly. Medicare was able to slow spending on physician services with the physician fee schedule that began in 1992.



**Chart 1-9. Share of Medicare and Private Health Insurance Spending, by Sector, 1996**

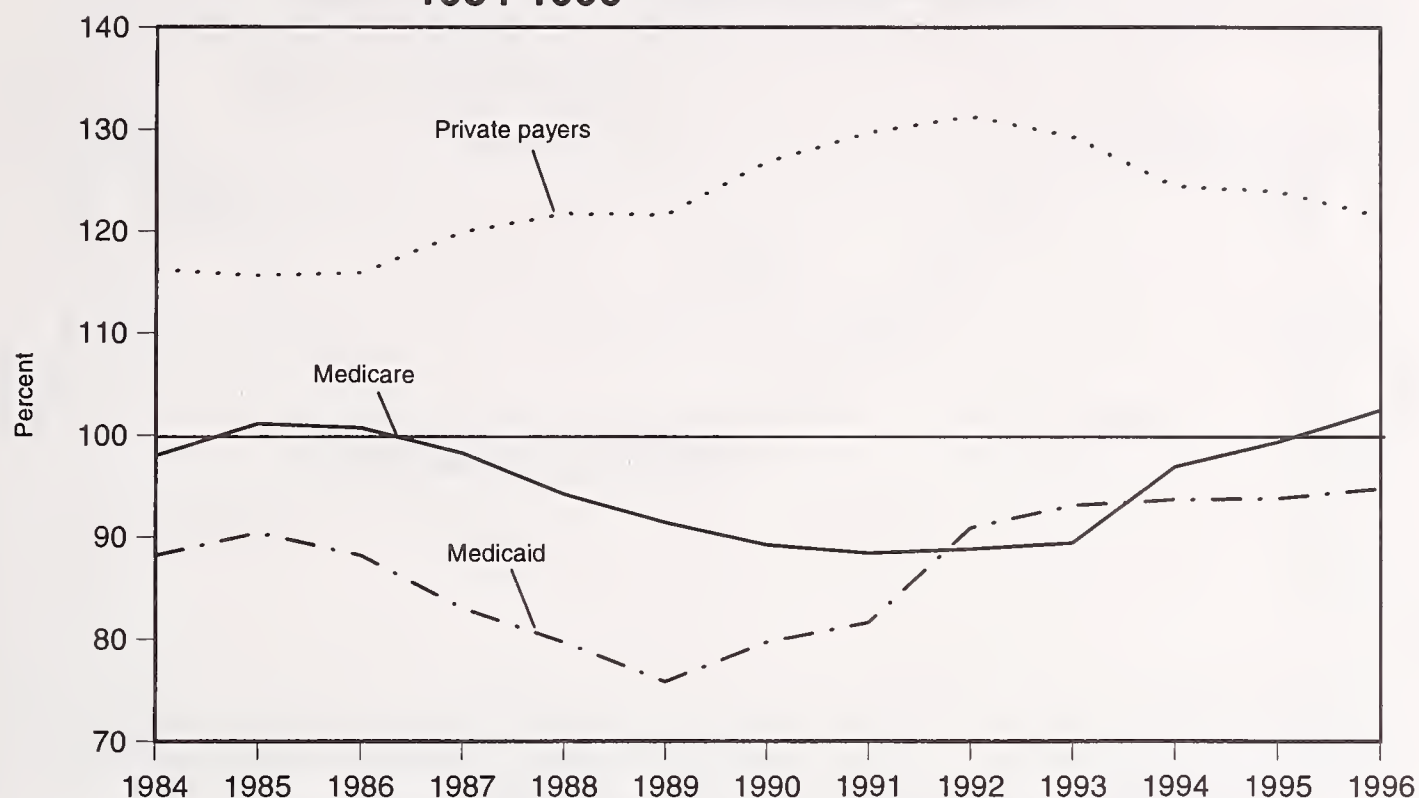


NOTE: Spending includes personal health care plus program administration or net cost of private health insurance.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

The Medicare program still spends over half its funds on hospital care, while private insurance only spends a third. Similarly, Medicare has much higher proportions of spending on nursing facility and home health services, 4.4 and 6.7 percent, respectively. By contrast, private health insurance allocates these providers only 1.2 and 0.9 percent. The older Medicare population and changes in coverage are the main reasons for these differences. Conversely, drugs (included in the other category) make up a much larger proportion of private health insurance than in Medicare, which has very limited prescription drug coverage.

**Chart 1-10. Aggregate Hospital Payment-to-Cost Ratios for Private Payers, Medicare, and Medicaid, 1984-1996**



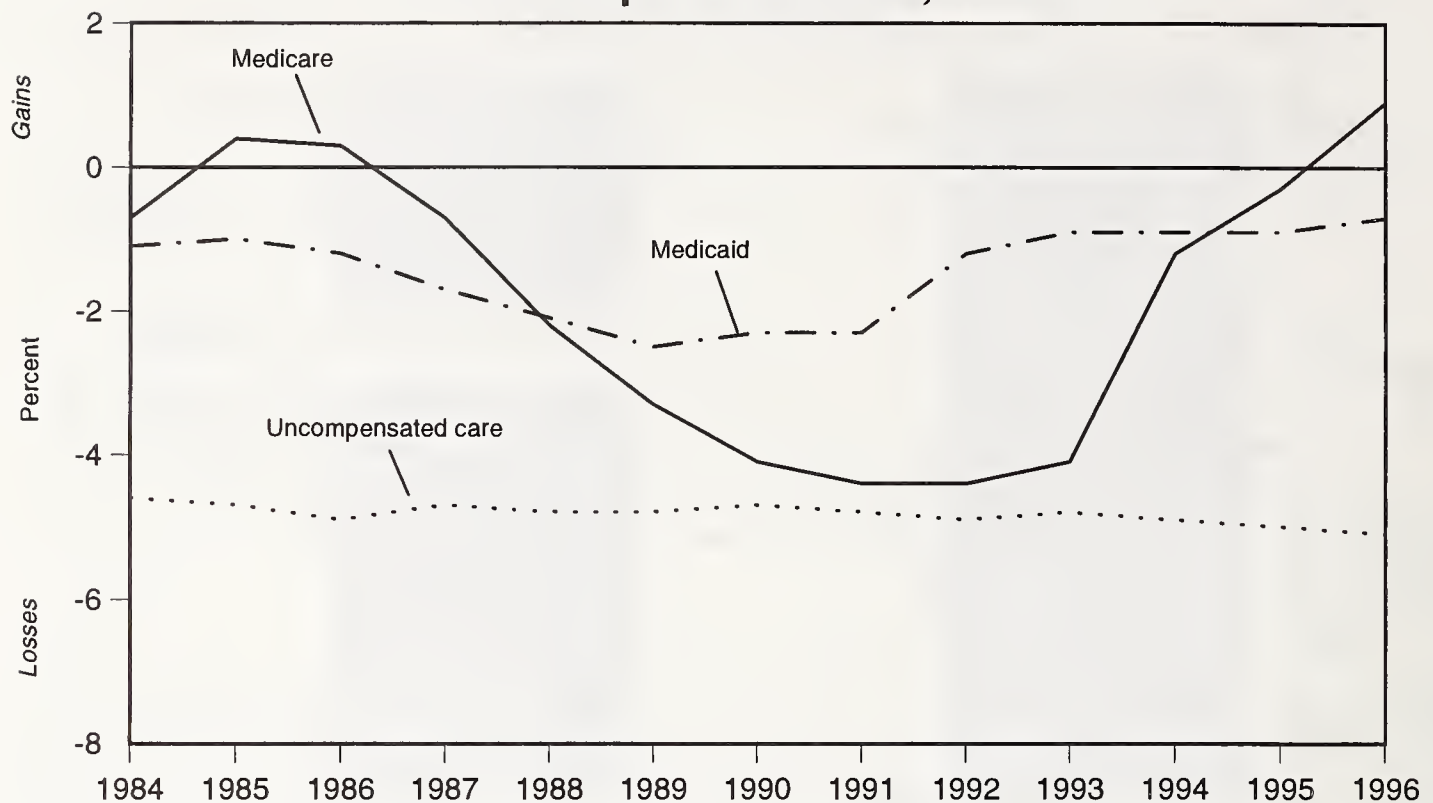
NOTE: Payment-to-cost ratios cannot be used to compare payment levels because the mix of services and cost per unit of service vary across payers. They do, however, indicate the relative degree to which payments from each payer cover the costs of treating its patients. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

In the first three years after Medicare's inpatient PPS was implemented, Medicare payments closely matched the costs of treating its patients. Over the next five years, however, hospitals' annual per case cost increases substantially exceeded the corresponding payment increases, resulting in a steady decline in the aggregate Medicare payment-to-cost ratio. The low point was 88 percent in 1991. The same general pattern was observed for Medicaid, for which the ratio dipped from 88 percent in 1984 to 76 percent in 1989. In general, hospitals were able to make up the lost revenue by raising the prices they charge private payers, resulting in the private payer payment-to-cost ratio rising from 116 percent in 1984 to a high of 131 percent in 1992.

Since 1992, hospitals have markedly reduced their per case cost growth in response to pressure from private payers. This pressure brought the private payer payment-to-cost ratio down to 121 percent by 1996. Because Medicare and Medicaid payment increases exceeded the lower rate of cost growth, Medicare and Medicaid payment-to-cost ratios rose to 102 percent and 95 percent, respectively, in 1996. It should be noted that the way in which the data are reported results in most Medicare and Medicaid managed care business being assigned to the private payers category.

**Chart 1-11. Aggregate Losses or Gains as a Percent of Total Hospital Costs for Medicare, Medicaid, and Uncompensated Care, 1984-1996**



NOTE: Losses or gains are the difference between the cost of providing care and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

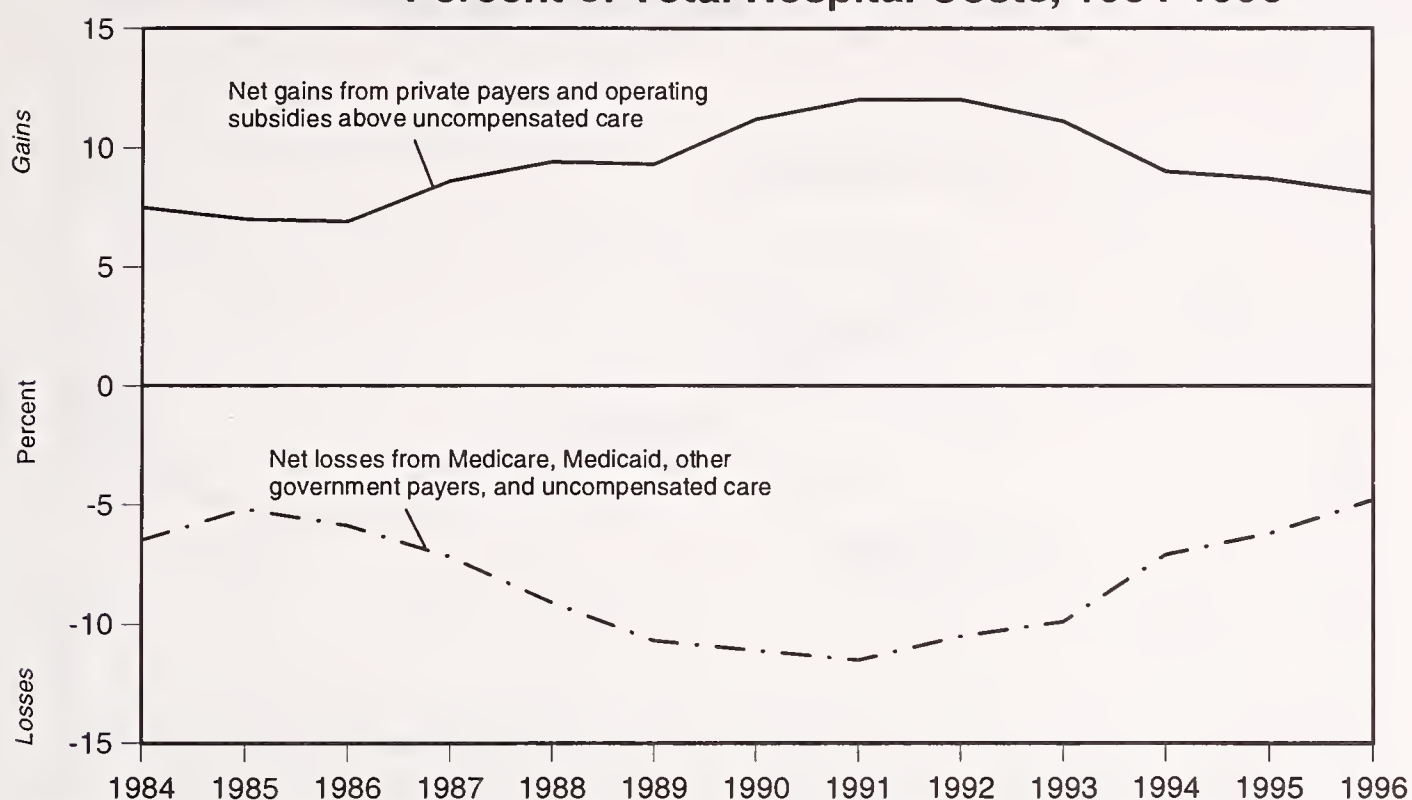
SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

A payer's gains or losses as a percent of total hospital costs are the product of its payment-to-cost ratio and its patient load (as represented by the share of costs devoted to treating its patients). Because both the Medicare and Medicaid share of costs has been rising, the changes in losses for these payers (increased losses through 1992, decreases thereafter) were even more pronounced than the changes in payment-to-cost ratios shown in the previous chart. The drop in losses has been much sharper for Medicare than Medicaid, crossing over to a gain for the first time in more than a decade in 1996. Medicare's payments have not grown faster than Medicaid's, but Medicare cost increases have been the lowest of any payer group.

Uncompensated care losses have grown modestly as a percent of total costs, from 4.6 percent in 1984 to 5.1 percent in 1996. This increase is due primarily to a relative decline in the operating subsidies from state and local governments that hospitals use to offset the costs of unpaid care. The share of costs attributable to uncompensated care has been stable over this twelve-year period.



**Chart 1-12. Aggregate Total Gains and Total Losses as a Percent of Total Hospital Costs, 1984-1996**

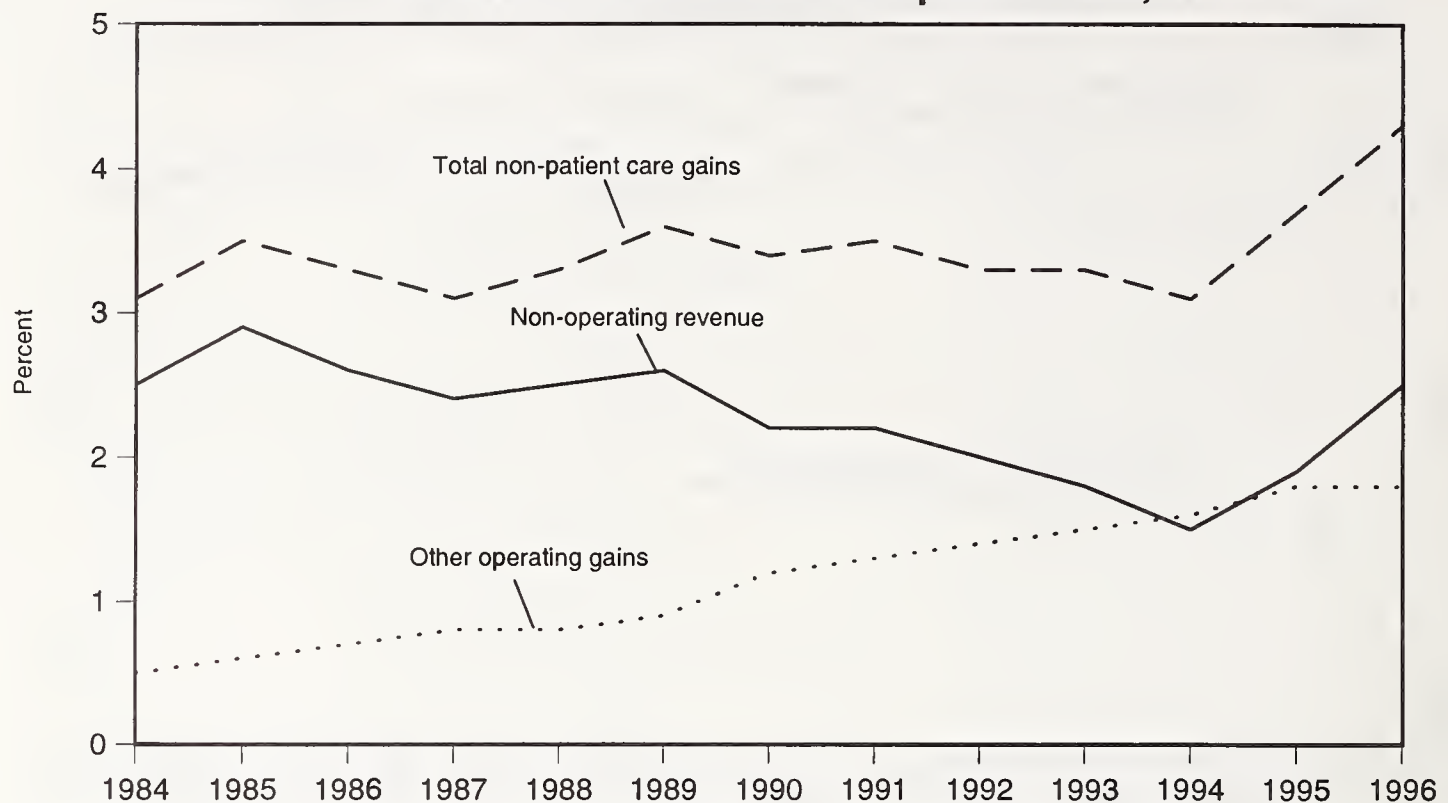


NOTE: Gains or losses are the difference between the cost of providing care and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Excludes non-patient care income. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

The trend in patient care gains (primarily from private payers) follows the trend in losses (primarily from Medicare, Medicaid, and uncompensated care) quite closely. Neither those losses nor those gains exceeded 7 percent of total hospital costs in the first three years of PPS. Then during the period of rapidly rising hospital costs (1987 through 1992), both the losses and the gains rose to about 12 percent of total costs. Since 1992, total losses from public payers and uncompensated care and total gains from private payers have receded again.

**Chart 1-13. Aggregate Gains from Non-Patient Care Services as a Percent of Total Hospital Costs, 1984-1996**



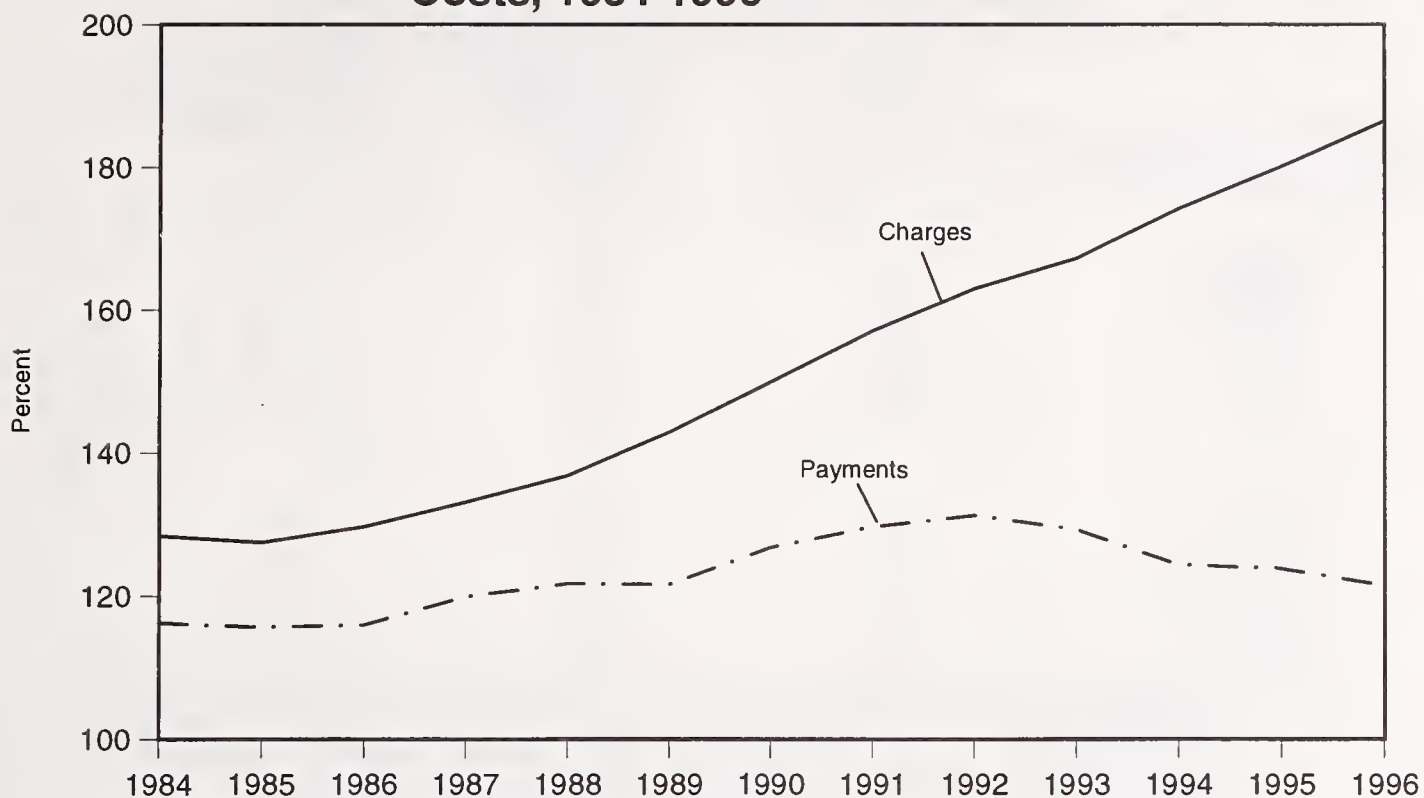
NOTE: Other operating gains are the difference between the revenues and associated expenses of non-patient care services, such as parking lots, cafeterias, and physician office buildings. Non-operating revenue comes primarily from donations and investment income. Data are for community hospitals, and imputed values were used for missing data (35 percent of observations).

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

Traditionally, gains from non-patient sources have contributed considerably more to hospitals' total margins than gains from patient care services. Net gains from operating non-patient care services have steadily increased, from 0.5 percent of total costs in 1984 to 1.8 percent in both 1995 and 1996. The pattern of change in revenue from non-operating sources (primarily donations and investment income) has been less stable over time. That revenue fell as a percentage of total costs each year from 1989 through 1994, linked mostly to recessionary pressures and declining interest rates. Since 1994, however, there has been a major upturn. Non-operating revenue increased by nearly 40 percent relative to total expenses in just these two years, due to the nation's continuing economic expansion and a booming stock market. Although hospitals' net gains from all sources have risen as a percent of total costs for seven straight years, the largest increases have occurred since 1994 and that outcome is linked directly to the surge in non-patient care income.



**Chart 1-14. Aggregate Private Payer Charges and Payments as a Percent of Private Payer Costs, 1984-1996**



NOTE: Charges represent the amount that would have been collected if all patients paid full price. Payments are the amounts actually received. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

Charges, or list prices, for hospital services have continued to increase at roughly the same pace in the 1990s as in the late 1980s, even as the rate of growth in the payments actually received slowed considerably. Few purchasers pay full charges today, but the prices hospitals set still influence their revenue because many contractual arrangements with insurers structure payments in terms of a percentage discount off charges. Since 1992, charges for patients covered by private insurance have increased by 3.4 percent a year relative to the cost of care, while the payments made by private insurers declined an average of 0.2 percent annually.

The relationship between charges and payments highlights the wide disparity in the rates paid to hospitals by various payers. Those few patients who pay full charges paid 87 percent more than the cost of their care in 1996, compared to 22 percent over costs for the average privately insured patient. Although data are not available to analyze the distribution of payment levels within the private sector, Medicaid exemplifies the low end of the payment spectrum. On average, Medicaid programs paid only 95 percent of costs, which is about half of full charges.

**Chart 1-15. Highest and Lowest Aggregate Medicaid Payment-to-Cost Ratios, by State, 1996**

State	Medicaid Payment-to-Cost Ratio	Medicaid Costs as Percent of Total Costs	Medicaid Gains or Losses as Percent of Total Costs
U.S. totals	94.8%	13.9%	-0.7%
Highest:			
Mississippi	117.9	12.2	2.2
South Carolina	112.0	20.4	2.5
Maryland	110.3	10.5	1.1
Utah	109.9	10.4	1.0
Nevada	108.4	8.1	0.7
Texas	107.0	14.7	1.0
Lowest:			
Kansas	76.6	8.8	-2.1
Connecticut	74.0	12.9	-3.3
New Hampshire	73.5	7.4	-2.0
Illinois	72.5	12.2	-3.4
Tennessee	58.6	16.0	-6.6
Hawaii	58.3	10.7	-4.4

NOTE: The payment-to-cost ratio indicates the relative degree to which Medicaid payments cover the costs of treating Medicaid patients. Gains or losses are the difference between the cost of providing care and the payment received. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicaid managed care patients are included in the private payers category.

Totals for all states were calculated using reported and imputed data (35 percent of observations); values for states reflect reported data only. The sample of hospitals was insufficient to display meaningful results for Alaska, Louisiana, Minnesota, Delaware, and the District of Columbia.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

Because Medicaid payment policy is largely controlled by the individual state programs, there is wide variation in the aggregate payment-to-cost ratios among states—from 118 percent of costs in Mississippi to 58 percent in Hawaii. At the high end of the scale, Medicaid payments relative to costs approach the average of those in the private sector. In some states, particularly Mississippi and South Carolina, the high payment-to-cost ratio is linked to extensive use of Federal matching funds for Medicaid disproportionate share payments. In Maryland, by contrast, the above-average level of payments results from applying nearly uniform payment rates across all payers as part of its waived rate setting system. The majority of the patients in Medicaid managed care programs are reflected in the private payers category in this analysis. But because of the pervasiveness of managed care in Tennessee and Hawaii, many hospitals in these states are reporting their managed care data in the Medicaid category. Thus, the low aggregate payment-to-cost ratios in these states—59 and 58 percent, respectively—are heavily influenced by the payment rates negotiated between hospitals and health plans.

Although the size of the Medicaid patient share also varies by state, aggregate gains or losses at the state level are still linked most closely to the payment-to-cost ratio.



**Chart 1-16. Highest and Lowest Private Payer Payment-to-Cost Ratios and Aggregate Gains or Losses, by Payer and State, 1996**

State	Private Payers		Gains or Losses as Percent of Total Costs			Total Gains as Percent of Total Costs
	Payments as Percent of Private Payer Costs	Gains as Percent of Total Costs	Medicare	Medicaid	Uncompensated Care	
U.S. totals	122%	7.9%	0.9%	-0.7%	-5.1%	7.2%
Highest:						
South Carolina	162	16.4	0.1	2.5	-8.1	15.7
Mississippi	153	15.5	-1.6	2.2	-8.2	11.5
North Dakota	147	16.0	0.3	-0.3	-6.0	13.1
Idaho	146	20.3	-2.3	-1.7	-3.4	15.9
Arkansas	146	13.9	2.2	-2.7	-9.7	7.7
Maine	146	15.9	-8.9	0.5	-3.3	8.9
Lowest:						
Michigan	115	6.7	-0.2	-0.5	-2.8	7.1
Maryland	115	5.8	4.1	1.1	-7.1	5.9
Pennsylvania	112	5.1	-0.4	-1.9	-2.6	5.3
Arizona	112	5.3	2.4	-3.3	-3.5	4.9
New York	110	2.9	2.1	-0.8	-7.2	1.9
Massachusetts	109	3.8	2.2	-1.8	-5.6	4.0
Rhode Island	108	3.5	3.6	0.5	-3.8	9.4

NOTE: Gains or losses are the difference between the cost of providing care and the payment received. Operating subsidies from state and local governments are considered payment for uncompensated care up to the level of each hospital's uncompensated care costs. Total gains reflect other government payers and non-patient sources of revenue, in addition to the categories shown. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicare and Medicaid managed care patients are included in the private payers category.

Totals for all states were calculated using reported and imputed data (35 percent of observations imputed); values for states reflect reported data only. The sample of hospitals was not sufficient to display meaningful results for Alaska, Delaware, Louisiana, Minnesota, and the District of Columbia.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

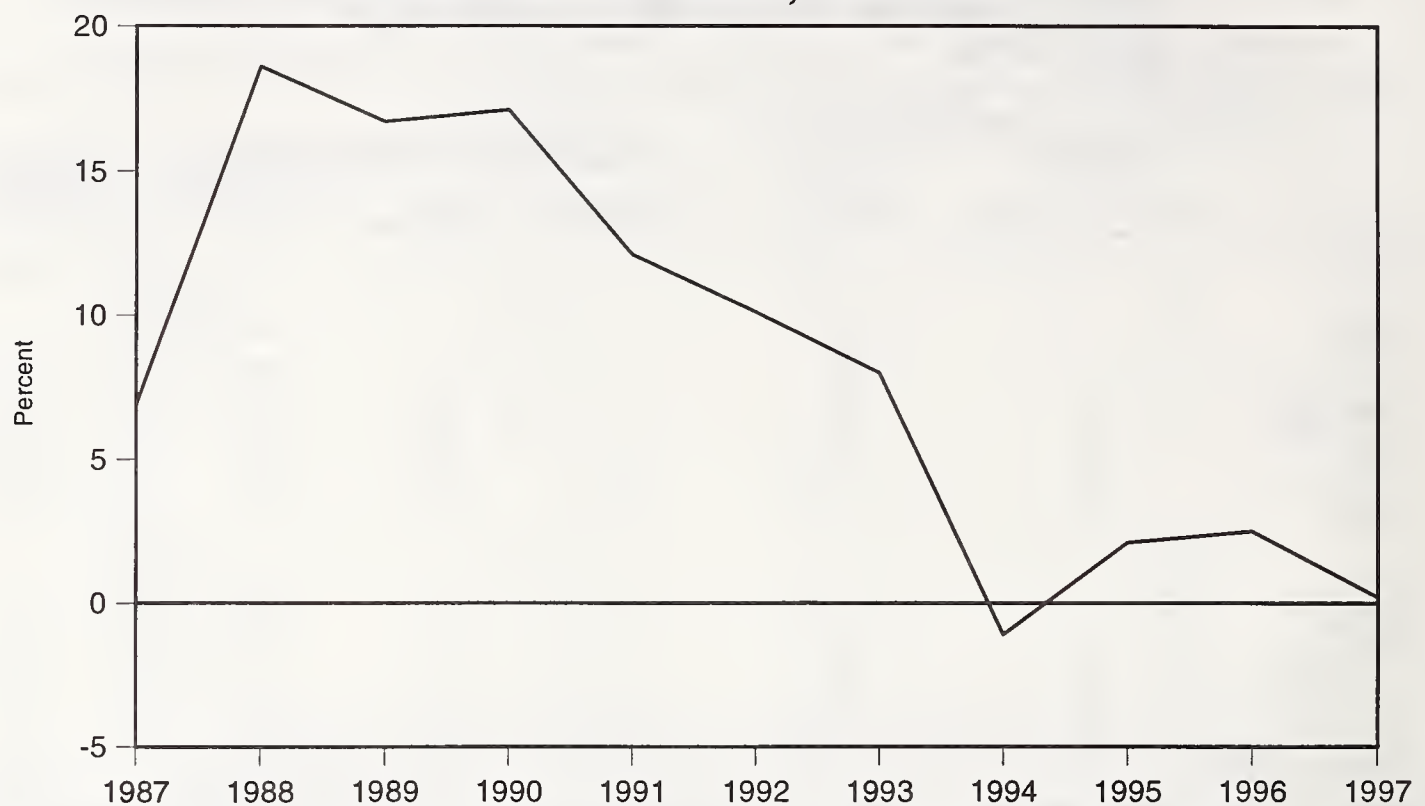
Although not as wide as for Medicaid, the variation in private payer payment-to-cost ratios among the states nonetheless is substantial—from 162 percent in South Carolina to 108 percent in Rhode Island. The states with the lowest ratios have high managed care penetration in common, suggesting that their hospitals operate with more downward payment pressure from negotiating with health plans. Similarly, the states with the highest ratios generally have low managed care penetration.

In some cases, above-average gains from private payers are needed to offset other losses. For example, the three states with the largest aggregate uncompensated care burdens are South Carolina, Mississippi, and Arkansas, all of which are among those with the highest private payer payment-to-cost ratios. Generally, however, high payments relative to costs in the private sector lead to high total gains from all revenue sources, and vice versa.<sup>1</sup> The highest total gains—almost 15.9 percent of costs—were found in Idaho, while the lowest—1.9 percent—were in New York.

<sup>1</sup> Gains from all revenue sources as a percent of total costs differs from a total margin only in that total costs are used in the denominator instead of total revenue.



**Chart 1-17. Annual Change in Average Total Per-Employee Health Benefit Cost, 1987-1997**



NOTE: Includes active and retired employees of firms with 10 or more employees.

SOURCE: Mercer/Foster Higgins, *National Survey of Employer-Sponsored Health Plans*.

The average per-employee cost of providing benefits has slowed considerably since 1993 and barely increased in 1997, edging up only 0.2 percent. During the 1990s, managed care has come to be the dominant form of employer-based insurance. The negotiated provider discounts and utilization control associated with managed care and the spread of some of its cost-control methods to indemnity insurance have resulted in extremely low growth in health benefit costs in recent years.

**Chart 1-18. Source of Health Insurance for the Non-Elderly, Selected Years (In Percent)**

Source	1989	1992	1996
Employer*	72.2	68.0	66.9
Other private coverage	6.6	6.5	6.8
Medicare	1.5	1.7	2.0
Medicaid	8.8	11.8	12.1
Uninsured	15.7	17.0	17.7

NOTE: Shares may add up to more than 100 percent because some individuals receive coverage from more than one source.

\* Includes Civilian Health and Medical Program for the Uniformed Services and the Civilian Health and Medical Program for the Department of Veterans' Affairs.

SOURCE: Employer Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 1997 Current Population Survey, 1997.*

Since 1989, the percent of non-elderly with employer-based health insurance has declined from 72.2 to 66.9 percent. During this time, the shares of people in Medicaid and without insurance have risen. Medicaid eligibility has expanded in recent years as employment-based coverage has fallen, but the proportion of people unable or unwilling to take up employment-based coverage has continued to rise, despite continued economic expansion, hitting 17.7 percent in 1996.

**Chart 1-19. Share of Employees in Selected Types of Health Plans, 1993-1997**

Type of Health Plan	1993	1994	1995	1996	1997
Indemnity	48%	37%	29%	23%	15%
Preferred provider organization	27	25	29	31	35
Health maintenance organization	19	23	27	27	30
Point of service	7	15	14	19	20

SOURCE: Mercer/Foster Higgins, *National Survey of Employer-Sponsored Health Plans*.

Recent years have brought a rapid decline in the number of employees enrolled in traditional indemnity insurance. In 1997, only 15 percent remained, down from 48 percent in 1993. As a result, most types of managed care plans have grown. Notable is the expansion in the share of employees in plans with a point of service option, up to 20 percent in 1997 from only 7 percent in 1993. Further, in 1997, the ranks of employees in traditional HMOs increased 3 percentage points, to 30 percent, due mainly to new insurance offerings from small firms.

**Chart 1-20. Share of Employees Covered at Firms Offering Health Insurance, by Size of the Firm, 1989 and 1996**

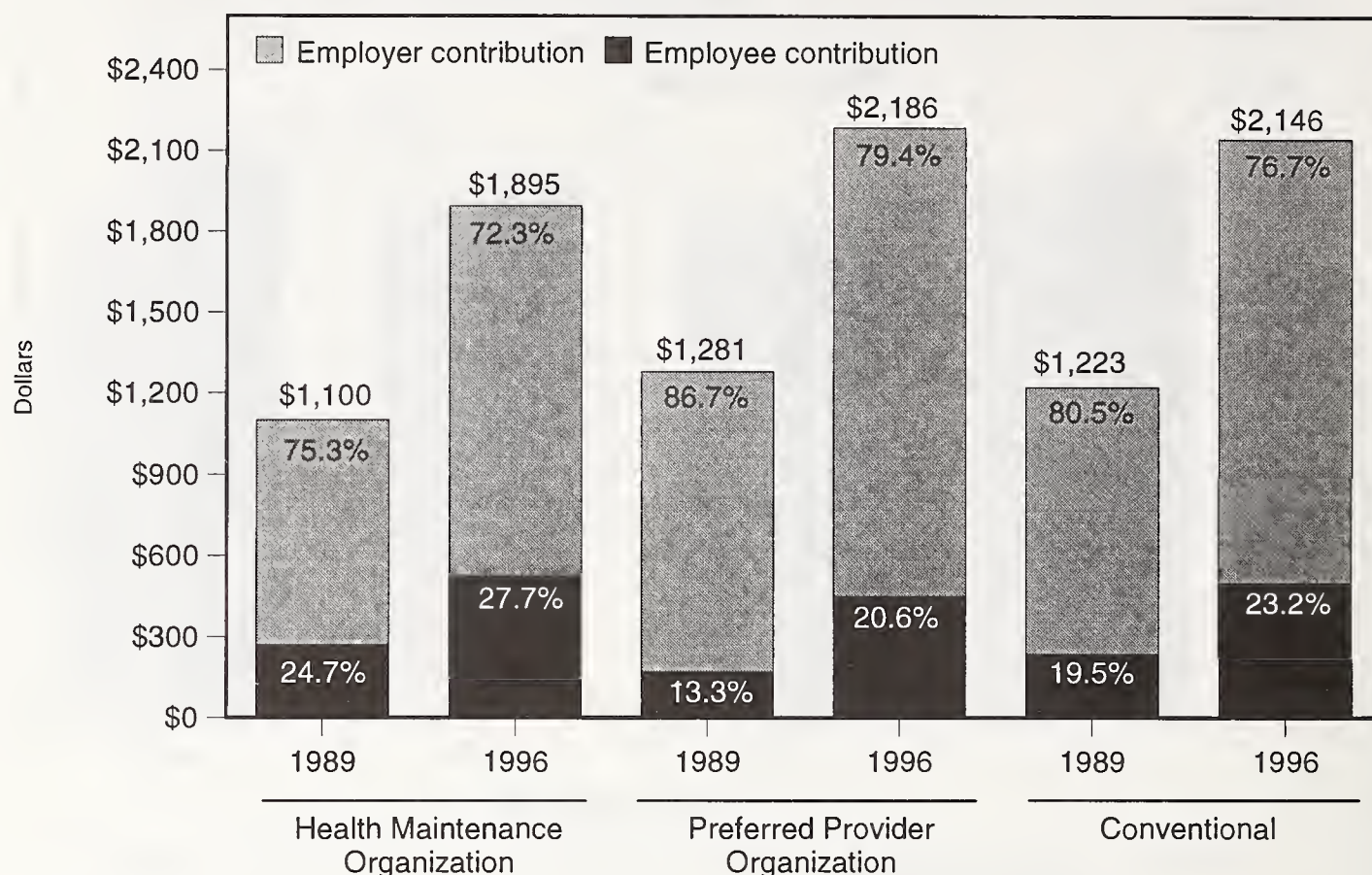


SOURCE: University of California at Los Angeles, Center for Health Policy Research, *Trends in Job-Based Health Insurance Coverage*.

Between 1989 and 1996, the percentage of employees covered at firms offering health insurance fell across all sizes of employer. The proportion of those covered at the largest firms (over 200 employees) showed the largest decline, falling from 79 to 70 percent. Although there was no decrease in the percentage of firms that did offer health benefit packages during this time, a greater proportion of employees were not eligible for firms' coverage or declined offered coverage. Since 1989, the employee share of health insurance premiums has risen and some firms have restricted which employees are eligible for health benefits. Further, during this time, most firms restricted the choices of plans offered to employees, resulting in fewer employees taking up offered insurance.



**Chart 1-21. Average Employer and Employee Share of Individual Health Insurance Premiums 1989 and 1996**



SOURCE: University of California at Los Angeles, Center for Health Policy Research, *Trends in Job-Based Health Insurance Coverage*.

Between 1989 and 1996, employees' share of premium contribution increased for HMOs, PPOs, and traditional health insurance, indicating employees have borne an increasing share of health benefit costs. Although health insurance premiums have fallen slightly most recently, the large increases of the late 1980s and early 1990s have created a larger burden for employees. For example, the average annual employee contribution for an individual PPO policy was \$171 in 1989. That same premium was \$451 in 1996, an increase of 164 percent. In that same time, the average employer payment for PPO coverage increased from \$1,110 to \$1,735, or 56 percent. These increasing employee shares may be part of the reason why, despite no fewer firms offering insurance, a lower proportion of workers opted for coverage.

**Chart A-1. Total and Per Capita National Health Spending, 1980-1996**

Year	Total (In Billions)		Per Capita	
	Nominal	Real*	Nominal	Real*
1980	\$247.3	\$471.4	\$1,052	\$2,006
1981	286.9	499.6	1,205	2,099
1982	323.0	530.1	1,346	2,209
1983	355.3	559.7	1,468	2,313
1984	390.1	589.1	1,592	2,404
1985	428.7	625.2	1,736	2,531
1986	461.2	660.3	1,845	2,641
1987	500.5	691.3	1,986	2,743
1988	560.4	743.2	2,198	2,915
1989	623.5	789.0	2,426	3,070
1990	699.5	839.7	2,690	3,230
1991	766.8	883.4	2,916	3,359
1992	836.6	935.6	3,157	3,531
1993	895.1	971.9	3,340	3,627
1994	945.7	1,001.2	3,503	3,708
1995	991.4	1,020.6	3,631	3,739
1996	1,035.1	1,035.1	3,764	3,764

\* Adjusted by the consumer price index for all urban consumers (CPI-U-X1).

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

**Chart A-2. National Health Spending by Sector, 1980-1996 (In Billions)**

Years	Sector									
	Total	Inpatient Community Hospital	Outpatient Community Hospital	Federal Hospital <sup>a</sup>	Non- Community Hospital <sup>b</sup>	Physician	Skilled Nursing Facility	Home Health Agency	Other Personal Care <sup>c</sup>	Other Spending <sup>d</sup>
1980	247.3	74.4	11.2	9.0	8.1	45.2	17.6	2.4	49.1	30.2
1981	286.9	87.5	13.5	9.9	9.0	52.2	20.2	3.0	56.8	34.9
1982	323.0	99.9	15.6	10.8	9.8	57.7	22.8	3.6	63.1	39.7
1983	355.3	108.2	17.7	11.4	10.2	64.6	25.5	4.3	69.5	43.8
1984	390.1	114.1	20.3	12.3	10.9	72.6	27.9	5.1	78.3	48.6
1985	428.7	119.2	24.2	13.3	11.7	83.6	30.7	5.6	88.2	52.3
1986	461.2	125.2	28.1	14.0	12.6	93.1	33.5	6.4	97.7	50.7
1987	500.5	133.4	32.4	14.7	13.6	104.1	36.3	6.7	108.5	50.8
1988	560.4	143.5	38.1	15.2	14.7	118.7	39.8	8.4	120.8	61.1
1989	623.5	155.1	44.1	16.4	16.1	131.3	44.9	10.2	132.1	73.4
1990	699.5	169.2	52.4	17.9	17.0	146.3	50.9	13.1	147.8	84.8
1991	766.8	183.5	62.0	19.7	17.1	162.2	57.2	16.1	161.9	87.3
1992	836.6	196.4	71.4	20.7	16.8	175.9	62.3	19.6	177.5	95.9
1993	895.1	206.3	78.4	22.0	16.3	183.6	66.3	22.9	191.2	108.2
1994	945.7	211.1	86.2	22.7	15.8	190.4	70.9	25.6	205.8	117.2
1995	991.4	214.3	93.7	23.2	15.5	196.4	75.2	28.4	222.2	122.4
1996	1,035.1	217.1	102.3	24.1	15.1	202.1	78.5	30.2	237.9	127.9

<sup>a</sup> Includes Departments of Defense and Veterans Affairs; Public Health Service; Federal research; Federal, state, and local workers' compensation; subsidies to hospitals; and public health activities.

<sup>b</sup> Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

<sup>c</sup> Includes all payments (other than premiums) by individuals, such as deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

<sup>d</sup> Includes industrial in-plant health services, private donations, other provider non-patient revenues, and privately financed construction.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration Office of the Actuary.



**Chart A-3. National Health Spending, by Payment Source, 1980-1995 (In Billions)**

Years	Payment Source							
	Total	Medicare	Medicaid	Other Government Programs <sup>a</sup>	Total Private	Private Health Insurance <sup>b</sup>	Out-of-Pocket <sup>c</sup>	Other <sup>d</sup>
1980	247.3	37.5	26.1	41.1	142.5	69.8	60.3	12.5
1981	286.9	44.9	30.4	45.9	165.7	82.2	68.5	15.0
1982	323.0	52.5	32.1	50.0	188.4	95.4	75.4	17.5
1983	355.3	59.8	35.3	52.5	207.7	106.2	82.3	19.3
1984	390.1	66.4	38.2	55.4	229.9	119.2	90.9	19.9
1985	428.7	72.1	41.3	60.9	254.5	132.8	100.7	21.0
1986	461.2	76.8	45.5	67.5	271.4	140.6	108.1	22.8
1987	500.5	82.7	50.4	74.1	293.3	152.4	116.1	24.8
1988	560.4	90.1	55.1	80.9	334.3	178.1	127.5	28.7
1989	623.5	102.4	62.3	87.5	371.4	208.5	133.2	29.7
1990	699.5	112.1	75.4	96.9	415.1	238.6	144.4	32.1
1991	766.8	124.4	93.9	103.4	445.2	259.4	151.6	34.1
1992	836.6	141.4	106.4	110.8	478.1	282.5	159.5	36.1
1993	895.1	153.0	120.6	115.4	506.2	303.3	163.6	39.2
1994	945.7	169.8	130.9	123.1	521.8	315.6	164.8	41.3
1995	991.4	187.9	140.2	127.1	536.2	326.9	166.7	42.1
1996	1,035.1	203.1	147.7	132.3	552.0	337.3	171.2	43.5

<sup>a</sup> Includes Departments of Defense and Veterans Affairs; Public Health Service; Federal research; Federal, state, and local workers' compensation; subsidies to hospitals; and public health activities.

<sup>b</sup> Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

<sup>c</sup> Includes all payments (other than premiums) by individuals, such as deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

<sup>d</sup> Includes industrial in-plant health services, private donations, other provider non-patient revenues, and privately financed construction.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

**Chart A-4. Medicare Program Payments, 1980-1996**

Year	Total Program		Part A		Part B	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1980	\$ 36.8	21.4%	\$ 25.6	21.4%	\$ 11.2	21.4%
1981	44.8	21.5	30.7	20.1	14.0	24.7
1982	52.4	17.0	36.1	17.6	16.2	15.7
1983	58.9	12.4	39.9	10.3	19.0	17.0
1984	64.4	9.5	43.9	10.1	20.6	8.3
1985	72.1	11.9	48.2	9.9	23.9	16.2
1986	77.7	7.8	50.4	4.6	27.3	14.3
1987	82.0	5.5	50.3	-0.3	31.7	16.3
1988	88.6	8.0	53.3	6.1	35.2	11.0
1989	100.6	13.6	60.8	14.0	39.8	12.9
1990	111.0	10.3	67.0	10.2	44.0	10.6
1991	121.4	9.4	72.6	8.3	48.9	11.1
1992	135.8	11.9	85.0	17.2	50.8	4.0
1993	150.4	10.7	94.4	11.0	56.0	10.1
1994	164.9	9.6	104.5	10.8	60.3	7.7
1995	184.2	11.7	117.6	12.5	66.6	10.4
1996	200.3	8.8	129.9	10.5	70.4	5.7

NOTE: Includes administrative expenses.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.



**Chart A-5. Medicare Part A Benefit Payments, by Type of Service, 1980-1996**

Year	Inpatient Hospital		Skilled Nursing Facility		Home Health Agency <sup>a</sup>		Hospice	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1980	\$ 24.1	22.0%	\$ 0.4	3.9%	\$ 0.8	16.2%	\$ 0.0	—
1981	29.1	20.7	0.4	3.8	1.0	22.9	0.0	—
1982	33.8	16.3	0.5	18.0	1.3	31.9	0.0	—
1983	37.1	9.6	0.5	12.2	1.6	25.0	0.0	—
1984	40.5	9.2	0.5	0.2	1.8	15.4	<sup>b</sup>	—
1985	44.2	9.1	0.5	0.7	2.0	7.8	<sup>b</sup>	437.5
1986	45.7	3.4	0.6	4.9	2.0	1.3	0.1	74.4
1987	45.1	-1.2	0.6	10.4	1.7	-12.4	0.1	52.0
1988	47.5	5.2	0.8	29.3	2.1	19.1	0.2	33.3
1989	52.1	9.7	2.8	242.5	2.5	19.9	0.2	55.9
1990	56.9	9.3	2.5	-11.5	3.7	51.1	0.3	37.1
1991	60.6	5.5	2.5	-0.3	5.2	40.3	0.6	77.8
1992	68.6	14.2	3.5	42.4	7.2	37.0	0.8	46.2
1993	72.6	5.8	5.0	40.4	10.3	43.3	1.1	25.6
1994	76.1	4.9	6.7	34.5	13.0	26.1	1.5	40.6
1995	82.8	8.8	8.9	33.8	16.1	23.9	1.9	26.2
1996	86.8	4.8	10.7	19.4	17.5	8.8	2.0	6.1

NOTE: Does not include administrative expenses.

<sup>a</sup> Includes a small amount of home health payments from Part B.

<sup>b</sup> Hospice payments were \$8 million in 1984 and \$43 million in 1985, respectively.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

**Chart A-6. Medicare Part B Benefit Payments, by Type of Service, 1980-1997**

Year	Physician		Outpatient <sup>a</sup>		Other <sup>b</sup>	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1980	\$ 8.2	21.3%	\$ 1.9	24.6%	\$ 0.6	26.4%
1981	10.1	23.2	2.4	26.8	0.6	12.7
1982	11.9	17.9	3.0	24.4	0.6	-8.5
1983	14.1	18.2	3.4	13.1	0.7	16.0
1984	15.4	9.8	3.5	2.0	0.8	17.6
1985	17.3	12.2	4.3	25.1	1.3	69.8
1986	19.2	11.0	5.2	19.4	1.9	42.0
1987	22.6	17.7	5.9	14.7	2.3	22.3
1988	24.4	7.8	6.5	10.7	3.0	33.4
1989	27.1	11.0	7.7	17.2	3.6	16.8
1990	29.6	9.4	8.5	10.5	4.4	22.9
1991	31.9	7.8	9.9	17.0	5.5	25.6
1992	32.5	1.8	10.7	7.8	6.1	10.6
1993	34.6	6.5	12.6	12.6	6.8	11.2
1994	36.9	6.8	14.0	11.2	7.6	13.0
1995	40.5	9.6	15.6	11.3	8.9	16.2
1996	41.2	1.9	16.5	5.3	10.9	22.9
1997	42.4	2.8	17.4	5.9	12.9	18.6

NOTE: Does not include administrative expenses.

<sup>a</sup> Includes payments for outpatient services provided by hospitals, free-standing dialysis facilities, skilled nursing facilities, comprehensive outpatient rehabilitation facilities, rural health clinics, and other providers of Medicare-covered outpatient services.

<sup>b</sup> Includes Part B payments to home health agencies, group prepayment plans, and independent laboratories.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration, Office of the Actuary.

**Chart A-7. Aggregate Hospital Payment-to-Cost Ratios by Payer, 1980-1996**

Year	Medicare	Medicaid	Uncompensated Care	Private Payers
1980	95.8%	90.5%	27.7%	112.4%
1981	97.2	92.9	26.3	112.1
1982	96.0	90.8	24.2	114.5
1983	96.8	92.0	22.3	115.5
1984	98.0	88.2	23.3	116.2
1985	101.1	90.4	18.4	115.6
1986	100.7	88.2	22.3	115.9
1987	98.2	83.0	23.6	119.9
1988	94.2	79.7	22.4	121.7
1989	91.4	75.8	19.3	121.6
1990	89.2	79.7	21.0	126.8
1991	88.4	81.6	19.6	129.7
1992	88.8	90.9	18.9	131.3
1993	89.4	93.1	19.5	129.3
1994	96.9	93.7	19.3	124.4
1995	99.3	93.8	18.0	123.9
1996	102.4	94.8	17.3	121.5

NOTE: Payment-to-cost ratios cannot be used to compare payment levels because the mix of services and cost per unit of service vary across payers. They do, however, indicate the relative degree to which payments from each payer cover the costs of treating its patients. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

**Chart A-8. Aggregate Gains or Losses as a Percent of Total Hospital Costs, by Source of Revenue, 1980-1996**

Year	Total Gains	Medicare	Medicaid	Other Government Payers and Subsidies	Uncompensated Care	Private Payers	Non-Patient Care
1980	2.7%	-1.6%	-1.0%	0.7%	-3.9%	5.5%	3.0%
1981	2.7	-1.1	-0.8	0.6	-4.1	5.1	3.0
1982	3.5	-1.5	-0.9	0.6	-4.1	6.3	3.2
1983	4.1	-1.2	-0.8	0.4	-4.1	6.7	3.0
1984	3.9	-0.7	-1.1	0.4	-4.6	7.0	3.1
1985	5.0	0.4	-1.0	0.0	-4.7	6.7	3.5
1986	3.9	0.3	-1.2	-0.1	-4.9	6.6	3.3
1987	4.7	-0.7	-1.7	0.6	-4.7	8.2	3.1
1988	3.7	-2.2	-2.1	0.5	-4.8	9.0	3.3
1989	1.9	-3.3	-2.5	0.2	-4.8	8.9	3.6
1990	3.4	-4.1	-2.3	0.4	-4.7	10.8	3.4
1991	4.0	-4.4	-2.3	0.4	-4.8	11.6	3.5
1992	4.8	-4.4	-1.2	0.2	-4.9	11.8	3.3
1993	4.4	-4.1	-0.9	0.2	-4.8	10.9	3.3
1994	5.0	-1.2	-0.9	0.2	-4.9	8.7	3.1
1995	6.0	-0.3	-0.9	-0.1	-5.0	8.5	3.7
1996	7.2	0.9	-0.7	-0.1	-5.1	7.9	4.3

NOTE: Gains or losses are the difference between the cost of providing care (or operating a non-patient care service) and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Subsidies in excess of uncompensated care costs are combined with revenue from other government payers. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values were used for missing data (35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category. Gains and losses from the sources shown sum to total gains (except due to rounding).

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

**Chart A-9. Aggregate Medicaid Payment-to-Cost Ratios, by State, 1996**

	Medicaid Payment-to-Cost Ratio	Medicaid Costs as Percent of Total Costs	Medicaid Gains or Losses as Percent of Total Costs
U.S. totals	94.9%	13.9%	-0.7%
Mississippi	117.9	12.2	2.2
South Carolina	112.0	20.4	2.5
Maryland	110.3	10.5	1.1
Utah	109.9	10.4	1.0
Nevada	108.4	8.1	0.7
Texas	107.0	14.7	1.0
New Mexico	105.8	15.7	0.9
Rhode Island	105.3	9.4	0.5
Maine	103.5	13.4	0.5
Alabama	102.0	9.4	0.2
Colorado	98.6	10.8	-0.1
North Dakota	96.2	9.2	-0.3
New York	96.2	21.2	-0.8
Nebraska	95.9	8.7	-0.4
Missouri	95.9	12.0	-0.5
Michigan	95.1	10.3	-0.5
South Dakota	94.1	8.8	-0.5
Georgia	93.8	15.0	-0.9
Iowa	93.5	8.5	-0.6
Kentucky	92.9	14.0	-1.0
Washington	92.5	15.7	-1.2
Ohio	92.2	10.6	-0.8
West Virginia	92.1	14.9	-1.2
Wyoming	91.5	10.7	-0.9
New Jersey	90.5	8.3	-0.8
North Carolina	89.8	14.2	-1.5
Montana	87.1	11.5	-1.5
Indiana	86.3	9.0	-1.2
California	85.2	25.6	-3.8
Vermont	84.8	10.6	-1.6
Oklahoma	84.6	10.5	-1.6
Idaho	82.8	10.1	-1.7
Virginia	81.5	10.6	-2.0
Pennsylvania	81.3	10.2	-1.9
Oregon	81.1	12.4	-2.4
Florida	80.7	11.2	-2.2
Arizona	80.2	16.5	-3.3
Wisconsin	78.4	8.3	-1.8
Arkansas	77.3	11.7	-2.7
Massachusetts	77.3	8.0	-1.8
Kansas	76.6	8.8	-2.1
Connecticut	74.0	12.9	-3.3
New Hampshire	73.5	7.4	-2.0
Illinois	72.5	12.2	-3.4
Tennessee	58.6	16.0	-6.6
Hawaii	58.3	10.7	-4.4

NOTE: The payment-to-cost ratio indicates the relative degree to which Medicaid payments cover the costs of treating Medicaid patients in each state. Gains or losses are the difference between the cost of treating Medicaid patients and the payment received. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicaid managed care patients are included in the private payers category.

The totals for all states were calculated using reported and imputed data (35 percent of observations imputed); the values for states reflect reported data only. The sample of hospitals was insufficient to display meaningful results for Alaska, Louisiana, Minnesota, Delaware, and the District of Columbia.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.



**Chart A-10. Private Payer Payment-to-Cost Ratios and Hospital Gains or Losses, by Payer and State, 1996**

State	Private Payers		Gains or Losses as Percent of Total Costs			Total Gains as Percent of Total Costs
	Payments as Percent of Private Payer Costs	Gains as Percent of Total Costs	Medicare	Medicaid	Uncompensated Care	
U.S. totals	122%	7.9%	0.9%	-0.7%	-5.1%	7.2%
South Carolina	162	16.4	0.1	2.5	-8.1	15.7
Mississippi	153	15.5	-1.6	2.2	-8.2	11.5
North Dakota	147	16.0	0.3	-0.3	-6.0	13.1
Idaho	146	20.3	-2.3	-1.7	-3.4	15.9
Arkansas	146	13.9	2.2	-2.7	-9.7	7.7
Maine	146	15.9	-8.9	0.5	-3.3	8.9
Montana	143	15.2	-4.3	-1.5	-4.3	10.2
Virginia	141	16.2	-0.9	-2.0	-7.5	9.8
North Carolina	141	13.3	-0.1	-1.5	-5.6	12.0
Wyoming	140	16.4	-4.1	-0.9	-4.9	11.0
Texas	140	12.7	1.2	1.0	-6.6	13.0
West Virginia	138	9.7	-0.6	-1.2	-6.1	5.7
Florida	138	12.7	2.3	-2.2	-7.5	8.9
Kansas	138	14.2	-1.1	-2.1	-5.0	10.1
South Dakota	138	13.9	-5.8	-0.5	-2.4	10.4
Georgia	136	12.9	0.6	-0.9	-6.3	10.7
Tennessee	134	12.0	2.1	-6.6	-5.1	9.0
Iowa	134	12.7	-5.3	-0.6	-2.0	7.6
Indiana	133	13.4	-2.5	-1.2	-4.5	9.0
Kentucky	133	11.7	0.6	-1.0	-5.7	9.6
California	131	10.3	1.1	-3.8	-4.1	4.8
Nebraska	130	13.2	-3.2	-0.4	-2.6	11.6
New Hampshire	130	12.7	-2.5	-2.0	-5.6	7.8
Illinois	130	11.9	-2.3	-3.4	-4.2	7.9
Connecticut	129	10.5	-2.4	-3.3	-3.9	3.9
Colorado	128	12.6	0.8	-0.1	-7.1	8.5
Oklahoma	127	8.9	2.4	-1.6	-6.1	9.2
Wisconsin	127	11.7	-3.5	-1.8	-2.4	7.3
Nevada	126	11.3	1.8	0.7	-5.3	11.7
Utah	125	12.8	1.7	1.0	-5.1	12.9
New Jersey	125	8.7	-2.0	-0.8	-6.9	3.7
Alabama	124	9.0	2.0	0.2	-6.4	9.8
Vermont	124	9.7	-6.6	-1.6	-4.0	1.7
Missouri	124	9.0	-1.7	-0.5	-4.0	7.8
Hawaii	120	8.9	-2.3	-4.4	-2.3	4.7
Oregon	120	9.1	0.5	-2.4	2.8	7.6
Ohio	120	8.1	-1.5	-0.8	-4.1	6.1
Washington	117	7.1	1.7	-1.2	2.9	8.2
New Mexico	117	7.8	-0.2	0.9	-6.6	5.9
Michigan	115	6.7	-0.2	-0.5	-2.8	7.1
Maryland	115	5.8	4.1	1.1	-7.1	5.9
Pennsylvania	112	5.1	-0.4	-1.9	-2.6	5.3
Arizona	112	5.3	2.4	-3.3	-3.5	4.9
New York	110	2.9	2.1	-0.8	-7.2	1.9
Massachusetts	109	3.8	2.2	-1.8	-5.6	4.0
Rhode Island	108	3.5	3.6	0.5	-3.8	9.4

NOTE: Gains or losses are the difference between the cost of providing care and the payment received. Operating subsidies from state and local governments are considered payment for uncompensated care up to the level of each hospital's uncompensated care costs. Total gains reflect other government payers and non-patient sources of revenue, in addition to the categories shown. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicare and Medicaid managed care patients are included in the private payers category.

Totals for all states were calculated using reported and imputed data (35 percent of observations imputed); values for states reflect reported data only. The sample of hospitals was not sufficient to display meaningful results for Alaska, Delaware, Louisiana, Minnesota, and the District of Columbia.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

## Chapter 2

# MEDICARE MANAGED CARE

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Medicare's managed care risk contracting program started in 1982. It has allowed qualified health maintenance organizations (HMOs) to contract with Medicare and accept a preset, monthly per person (capitation) payment for enrolled beneficiaries. In return, the HMO (risk plan) accepts responsibility to furnish all Medicare-covered services to each enrollee. If a risk plan's projected average cost of providing Medicare services is less than Medicare's payment, then the plan must offer additional benefits of equivalent value. Plans also may offer other benefits and charge enrollees a premium to cover the related costs.

This chapter provides information about trends in risk program participation by plans and beneficiaries through 1998. In 1999, the risk program ends and will be replaced by the Medicare+Choice program, as mandated by the Congress in the Balanced Budget Act of 1997 (BBA). Existing risk-plan contracts cannot be renewed after January 1999, when most are expected to shift to Medicare+Choice contracts.

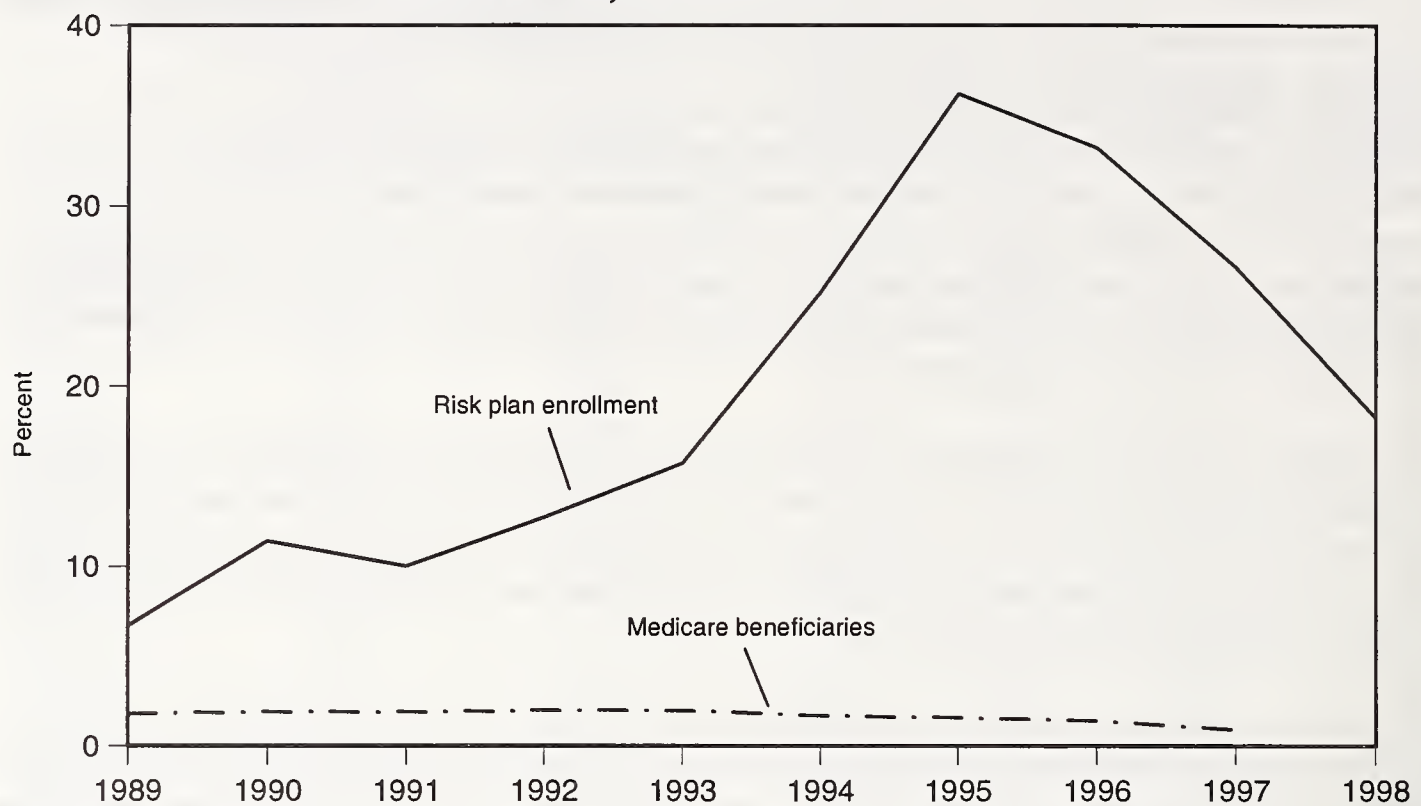
The Medicare+Choice program has new rules for beneficiary and plan participation and a new payment method (which started in 1998). Over the next few years, new types of plans will enter the Medicare+Choice program. These new options will likely affect availability and competition among plans in many markets. Premiums, benefits, and enrollment patterns also may change.

Data in this chapter describe both the end of the risk program and the beginning of Medicare+Choice. As Medicare+Choice develops, information on the new program can be compared with that in this chapter. Comparisons may focus on the number and location of plans, differences in benefits and premiums, and beneficiary enrollment patterns. Further, because Congress changed the payment method to both reduce geographic variation in payment and make rural markets more attractive to plans, the chapter also provides information on variation in the payment levels across counties and characteristics of the counties that experienced the largest increases in payment.

The charts in this chapter are based primarily on data from the Health Care Financing Administration's Center for Health Plans and Providers. Principal sources include the group health plan master file (a file containing person-level records of enrollments), the monthly contract report (information about all active risk plans), payment rates for all counties, and geographic service area reports. In addition, HMO industry data from the InterStudy Competitive Edge Part II, version 8.1 (April 1998) is used to provide additional information on the HMOs that participate in Medicare.

The chapter is organized into four sections. The first, enrollment, provides information on enrollee participation, duration of membership, and variations in enrollment rates. The second section addresses plan availability and characteristics. The next section describes the distribution of Medicare's payment rates. The chapter concludes with a section on the benefits plans offer and the premiums enrollees must pay.

**Chart 2-1. Annual Change in Medicare Risk Plan Enrollment, 1989-1998**



NOTE: 1998 data on Medicare beneficiaries is unavailable.

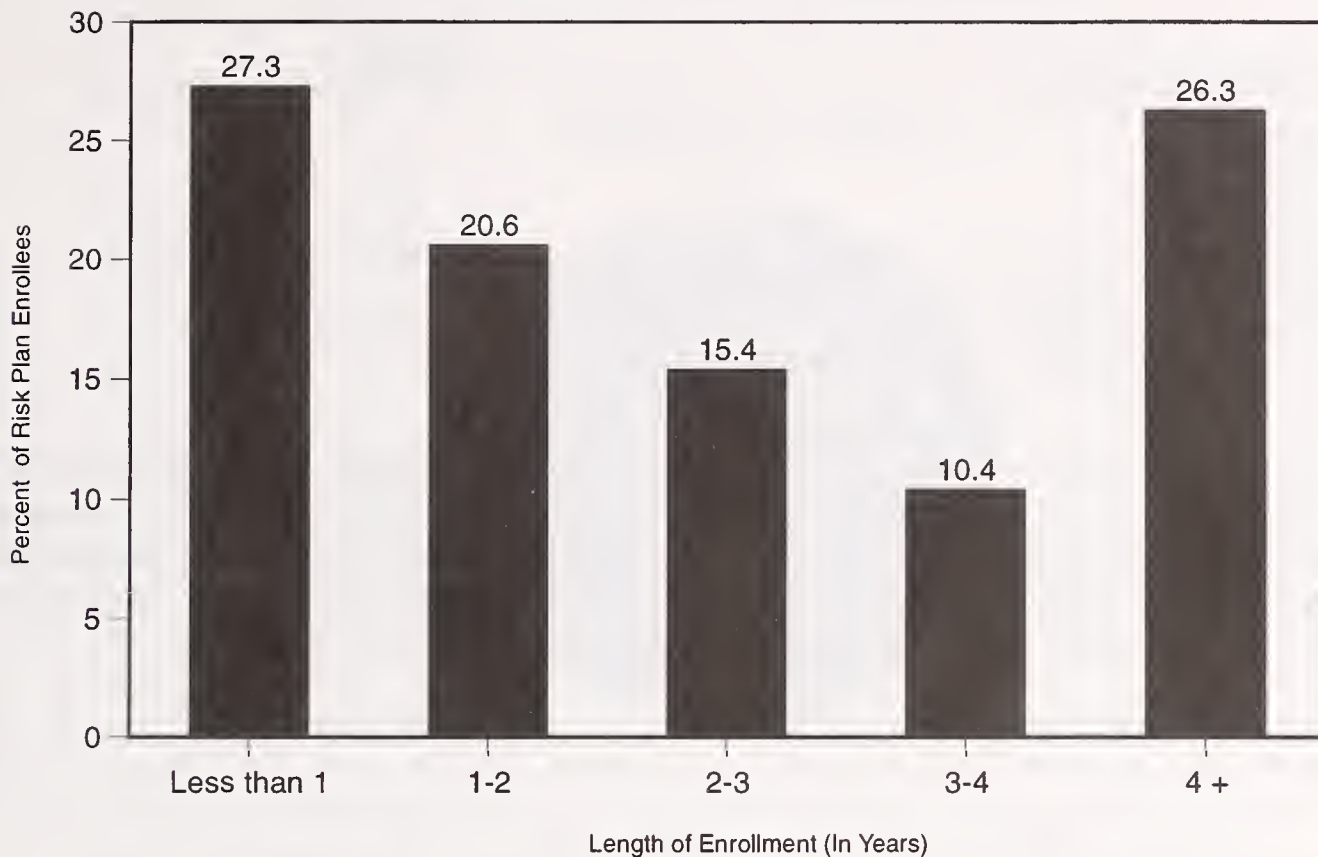
SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

The number of Medicare beneficiaries enrolled in risk plans has been rising rapidly throughout most of the 1990s, far surpassing the annual growth in the beneficiary population. Risk plan enrollment accelerated substantially after 1991, reaching an annual rate of 36 percent in 1995. Since then, the rate of increase has fallen each year although it remains above 20 percent today, representing a nationwide inflow of more than 50,000 new enrollees per month.

The continuing rise in enrollment probably reflects a variety of factors. Medicare beneficiaries generally have greater access to risk plans because more areas are served by at least one plan. In addition, many risk plans have added attractive extra benefits, like outpatient drug coverage, or have reduced the premium beneficiaries must pay to enroll. Other factors may be greater beneficiary familiarity with managed care from work experience and increased numbers of large employers offering risk plans to their retirees.



**Chart 2-2. Distribution of Risk Plan Enrollment, by Length of Enrollment, 1998**



NOTE: Based on data for April 1998.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

Because risk plan enrollment has been rising rapidly, a substantial proportion of all risk enrollees are new to the program. Nevertheless, the proportion of beneficiaries who have been enrolled for less than one year fell sharply from 39 percent in 1997 to 27 percent in 1998. This largely reflects the drop in the enrollment growth rate during the same period from almost 27 percent to an annualized rate of 18 percent. The slowdown in enrollment growth from the very high rates in the mid-1990s and a low disenrollment rate also account for the rise in the proportion of current risk enrollees who have remained in the risk program for at least four years. This group now accounts for more than one-quarter of all risk enrollees.

**Chart 2-3. Disenrollment Experience of First-Time Risk Plan Enrollees, 1996**

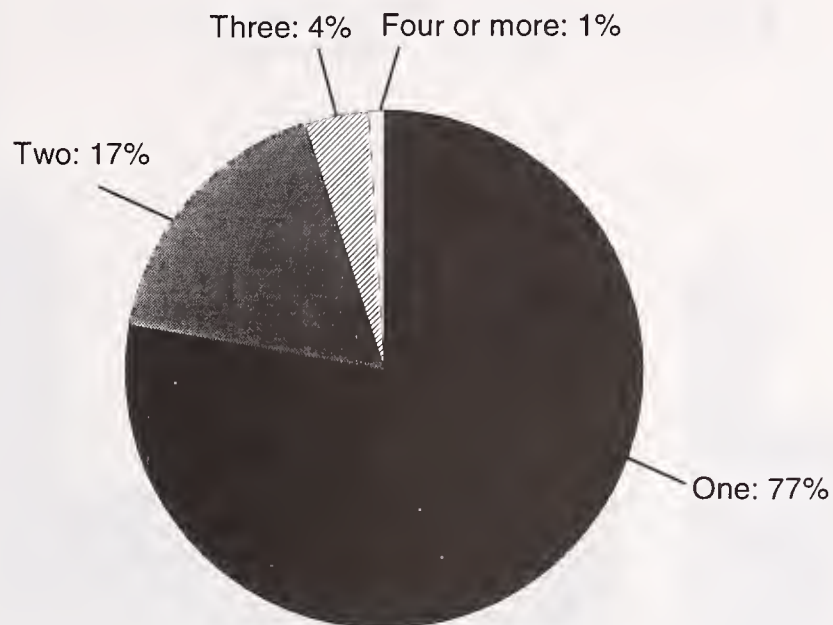
Disenrollment Experience	Percent Disenrolling
First year:	
First 3 months	4%
Second 3 months	5
Third 3 months	3
Last 3 months	3

NOTE: Excludes disenrollment due to death or other loss of Medicare eligibility.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

Excluding those who leave involuntarily because of death or loss of Medicare eligibility, very few beneficiaries who enroll in a risk plan subsequently leave the plan. Moreover, people who stay in a plan for longer periods are less likely to leave. Beneficiaries who leave voluntarily include those who move out of a plan's service area to live elsewhere and those who disenroll to return to Medicare's (traditional) fee-for-service program or to switch to another risk plan.

**Chart 2-4. Distribution of Risk Plan Enrollees, by Number of Plan Enrollments, 1998**



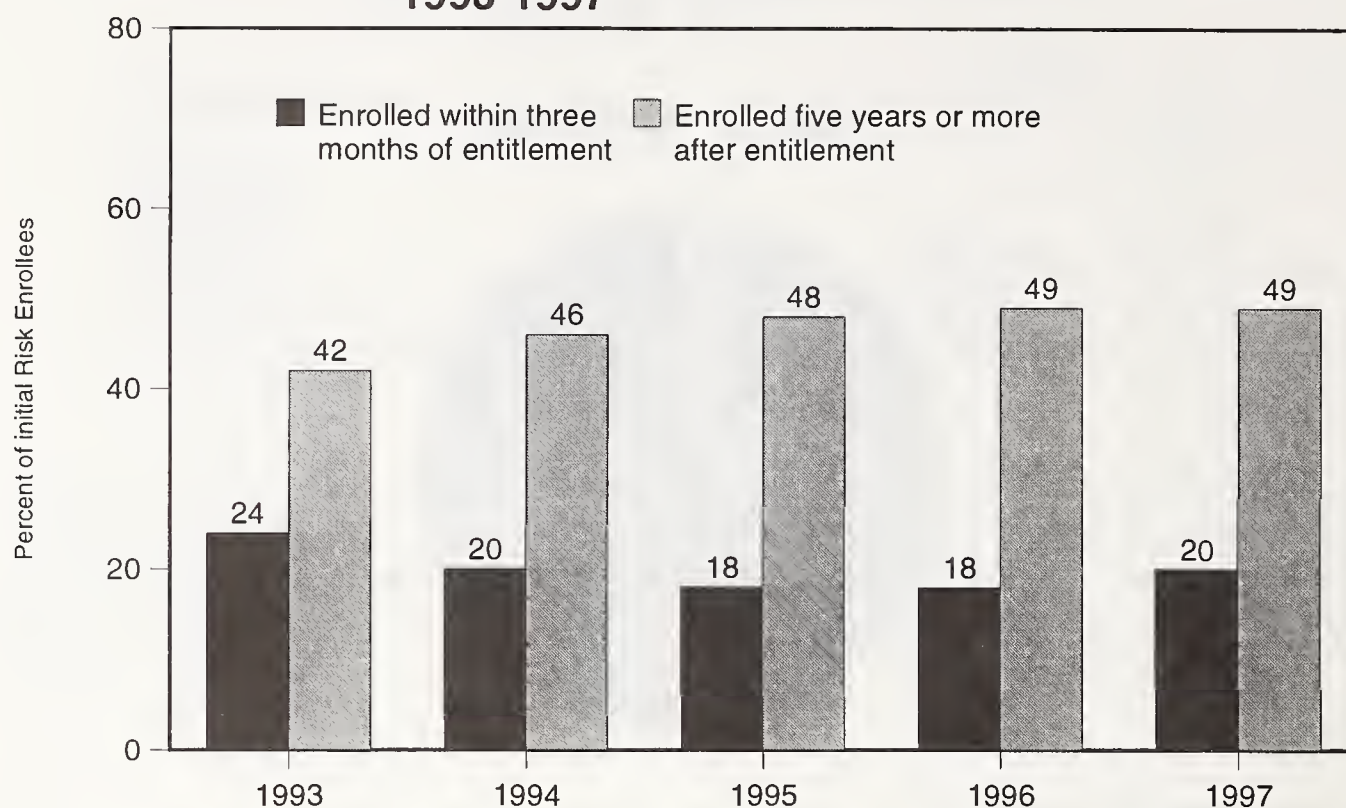
NOTE: Based on data for April 1998.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

More than three-quarters of current risk plan enrollees are still enrolled in the first plan they chose. To some extent, this reflects the large share of beneficiaries who enrolled in a plan for the first time relatively recently. It may also indicate that many enrollees are satisfied with the plan they selected. Some beneficiaries enrolled in risk plans, however, may face strong financial incentives to remain in a plan because either their employer-sponsored retiree health benefits are offered only through a particular risk plan, or they would face much higher premiums for supplemental (medigap) insurance if they returned to Medicare's fee-for-service program.



**Chart 2-5. Length of Time Between Medicare Part A Entitlement and Initial Risk Plan Enrollment, 1993-1997**

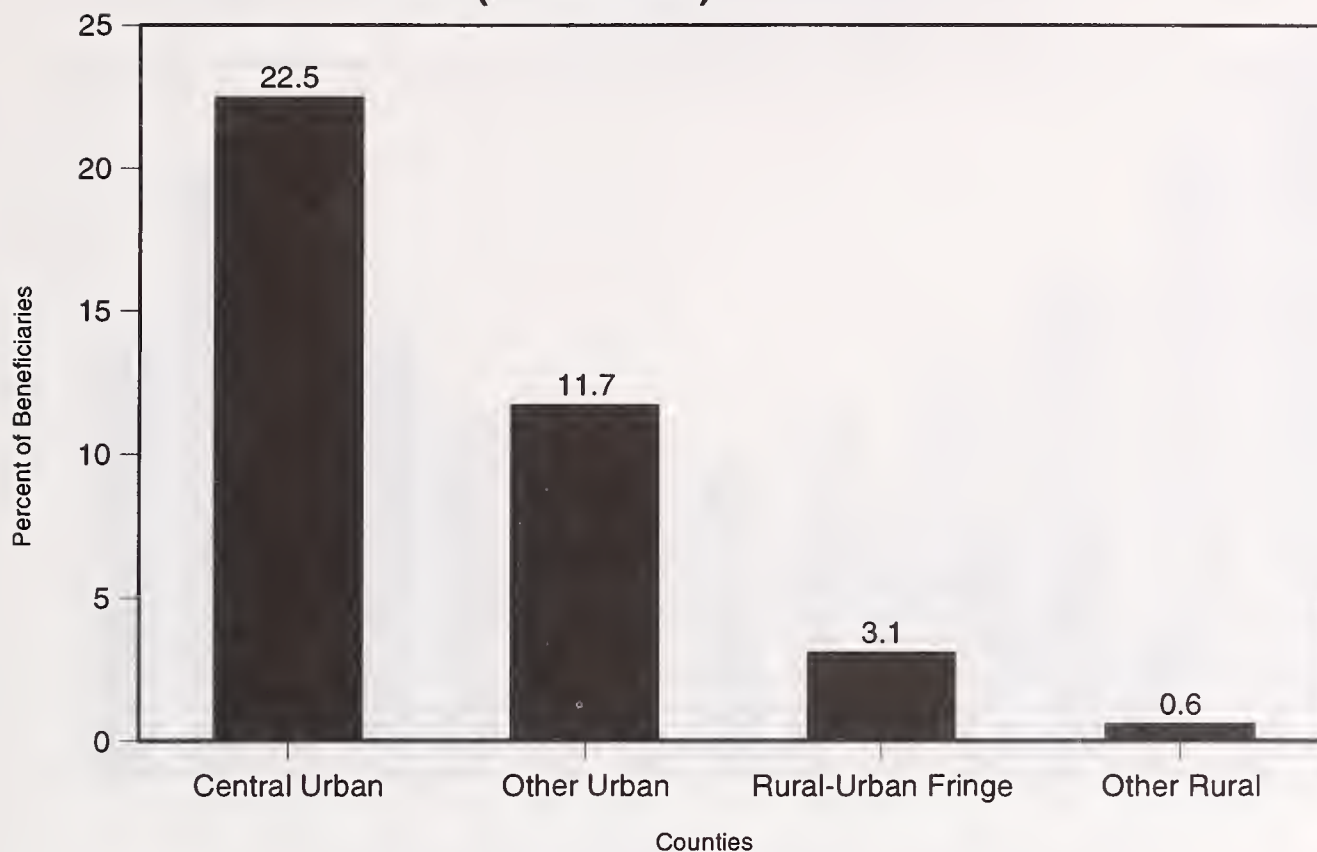


NOTE: Data for beneficiaries enrolled between 3 months and 5 years of Part A entitlement are not included.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

Beneficiaries who join a plan within three months of attaining eligibility for Medicare benefits account for only about one-fifth of new risk plan enrollees. This proportion was somewhat higher in the early 1990s, but has been roughly stable for the last four years. Almost half of all new enrollees are drawn from beneficiaries who have been in traditional Medicare for five or more years, and this proportion has been growing. In part, this reflects the increasing availability of risk plans; many new enrollees live in areas that, until recently, were not served by any risk plan. This phenomenon also means that risk plans are attracting an older (but not necessarily less healthy) segment of the beneficiary population.

**Chart 2-6. Medicare Beneficiaries in Urban and Rural Counties Who are Enrolled in Risk Plans, 1998 (In Percent)**

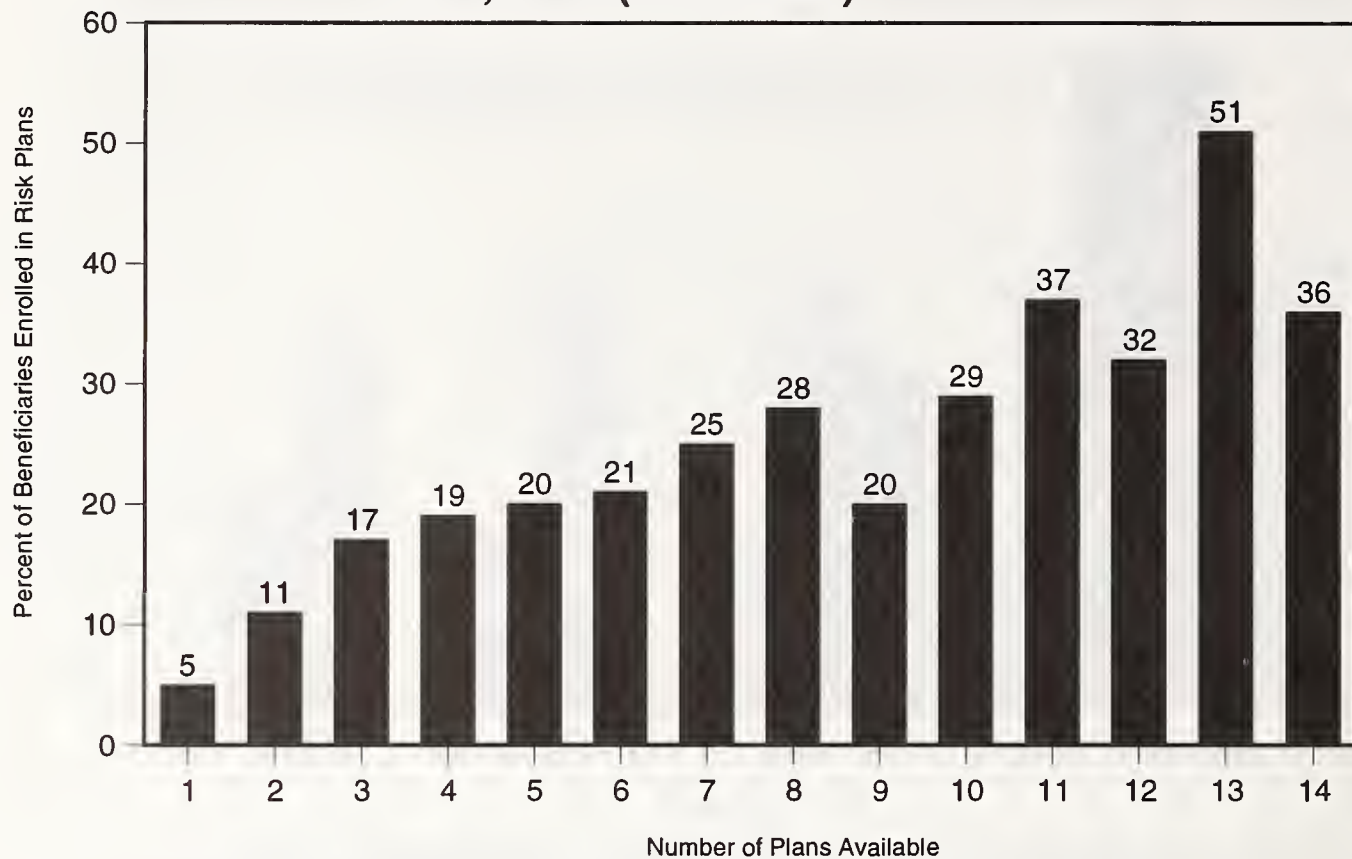


NOTE: Central urban counties are defined as the central counties in metropolitan areas of 1 million population or more; other urban refers to other counties in those metropolitan areas and any county in smaller metropolitan areas. Rural-urban fringe counties are defined as those non-metropolitan counties that are adjacent to a metropolitan area, and other rural refers to non-metropolitan counties not adjacent to a metropolitan area.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration. County classification is based on data from the Area Resource File.

Patterns of enrollment vary across urban and rural locales. Risk-plan enrollment in central urban areas (the cities at the core of the largest metropolitan areas) was about 23 percent in March 1998, compared to 12 percent in outlying urban areas. Risk-plan enrollment in remote rural areas (not adjacent to an urban area) was less than 1 percent. Risk-plan enrollment is growing in rural locales, however. For example, between 1997 and 1998, enrollment rates for rural areas adjacent to an urban area went from 1 percent to 3 percent.

**Chart 2-7. Medicare Beneficiaries Enrolled in Risk Plans, by the Number of Plans Available in Their Area, 1998 (In Percent)**



NOTE: Area is defined as the zip code in which the beneficiary resides.

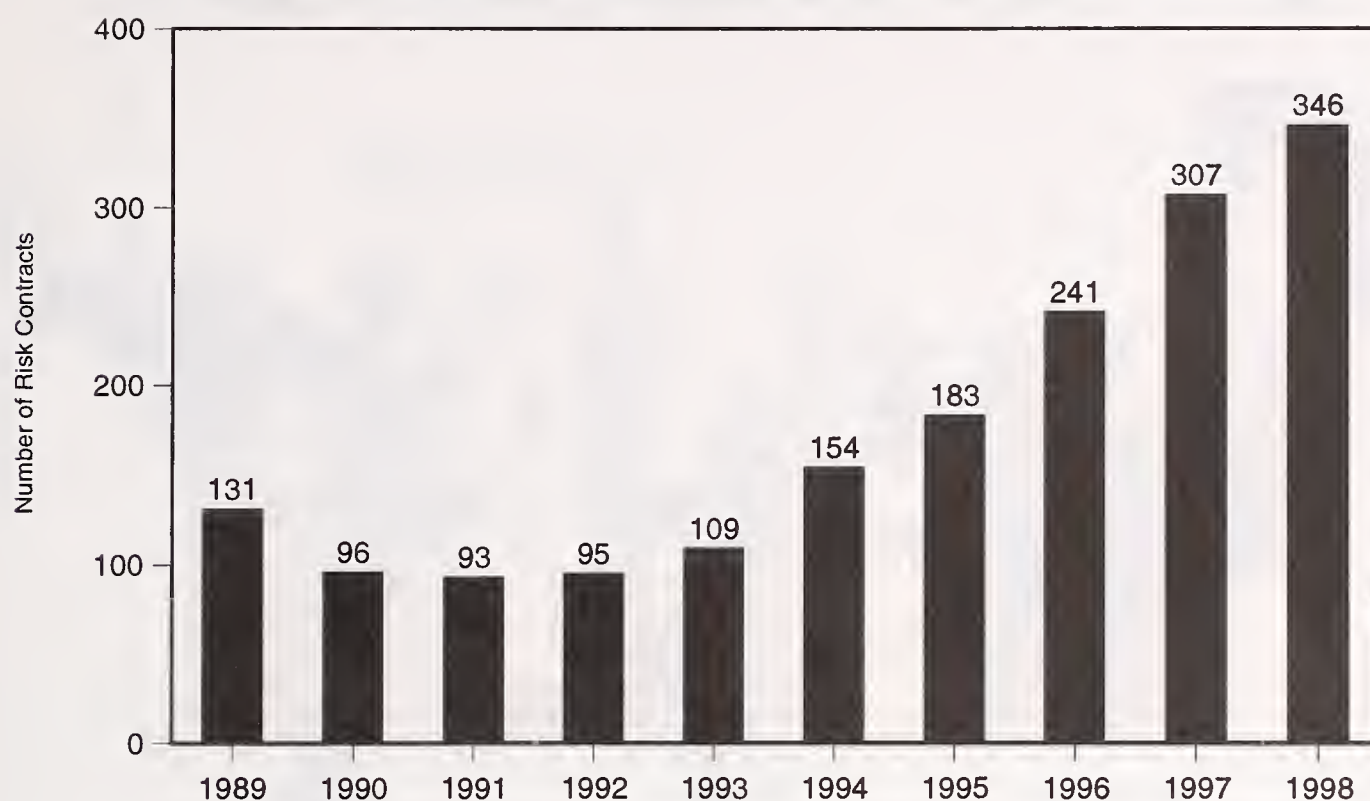
SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

The proportion of Medicare beneficiaries who enroll in a risk plan is closely related to the availability of risk plans in the area. On average, about five percent of beneficiaries enroll when they live in an area served by only one risk plan. By contrast, more than 30 percent of beneficiaries enroll when the area is served by 11 or more plans.

To some extent, differences in enrollment rates merely reflect variations in plan availability. The number of plans serving an area, however, is related to other factors that also may affect the likelihood that Medicare beneficiaries will enroll in a risk plan. For instance, HMOs are more likely to offer risk plans in areas where Medicare's plan payment rates are relatively high, and the risk plans they offer in such areas generally provide more attractive extra benefits or have lower premiums than plans serving areas with lower payment rates. HMOs are also more likely to offer a risk plan in areas where they have captured a relatively high share of the private employer-sponsored health insurance market. Beneficiaries who live in such areas are more likely to have been enrolled in a managed care plan while employed and may be more willing to join a risk plan once they are eligible for Medicare coverage.



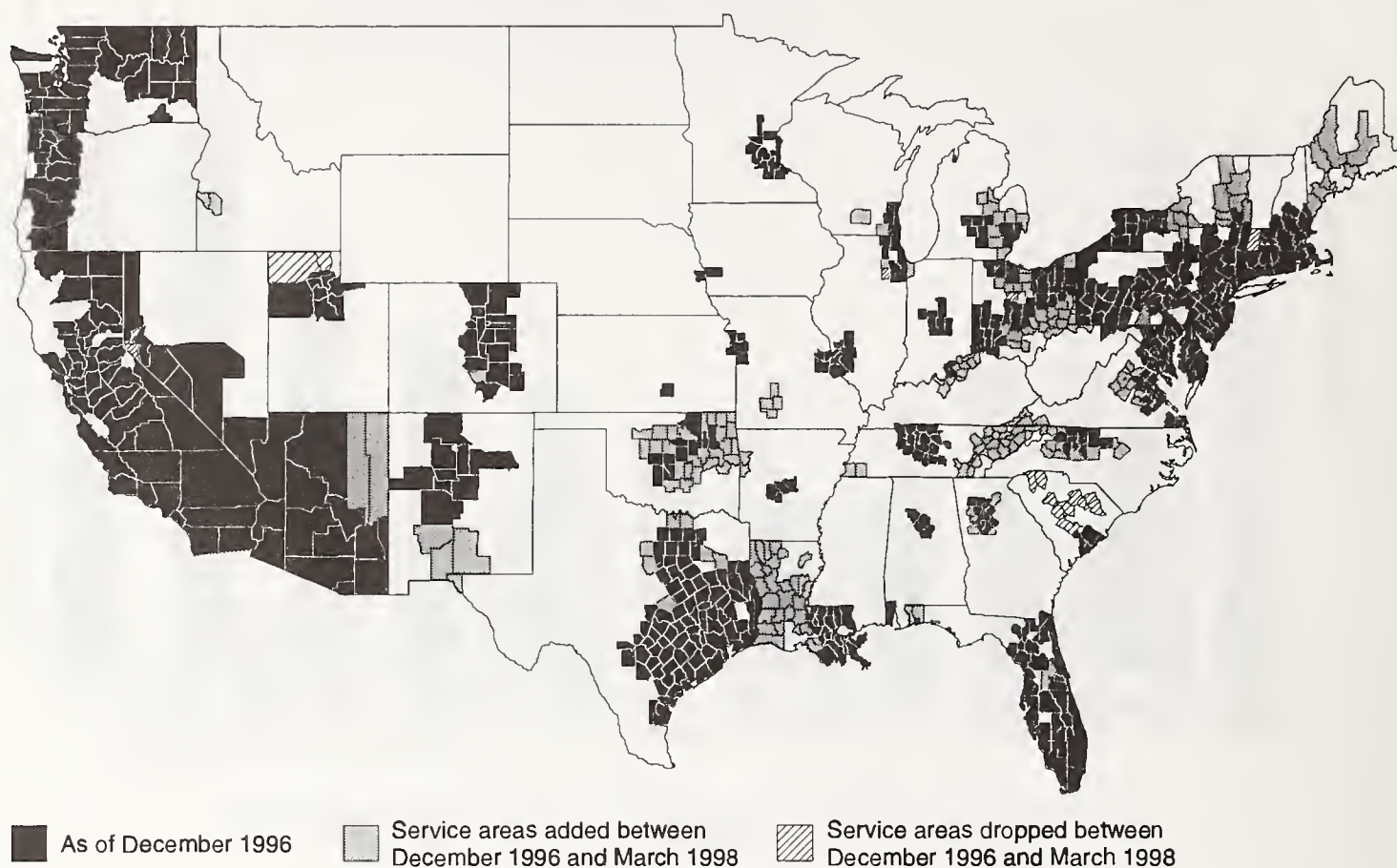
**Chart 2-8. Number of Medicare Risk Contracts, 1989-1998**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Managed Care Contract Reports from the Health Care Financing Administration.

The number of Medicare risk contracts has increased substantially since 1992, reaching 346 in June 1998. New contracts have been added at a particularly rapid rate in the last 18 months, with 117 contracts added since December 1996. Rising plan participation probably reflects several factors. For instance, many HMOs may have reached a level of maturity in their private business that has enabled them to expand into the Medicare market as way of increasing their overall enrollment.

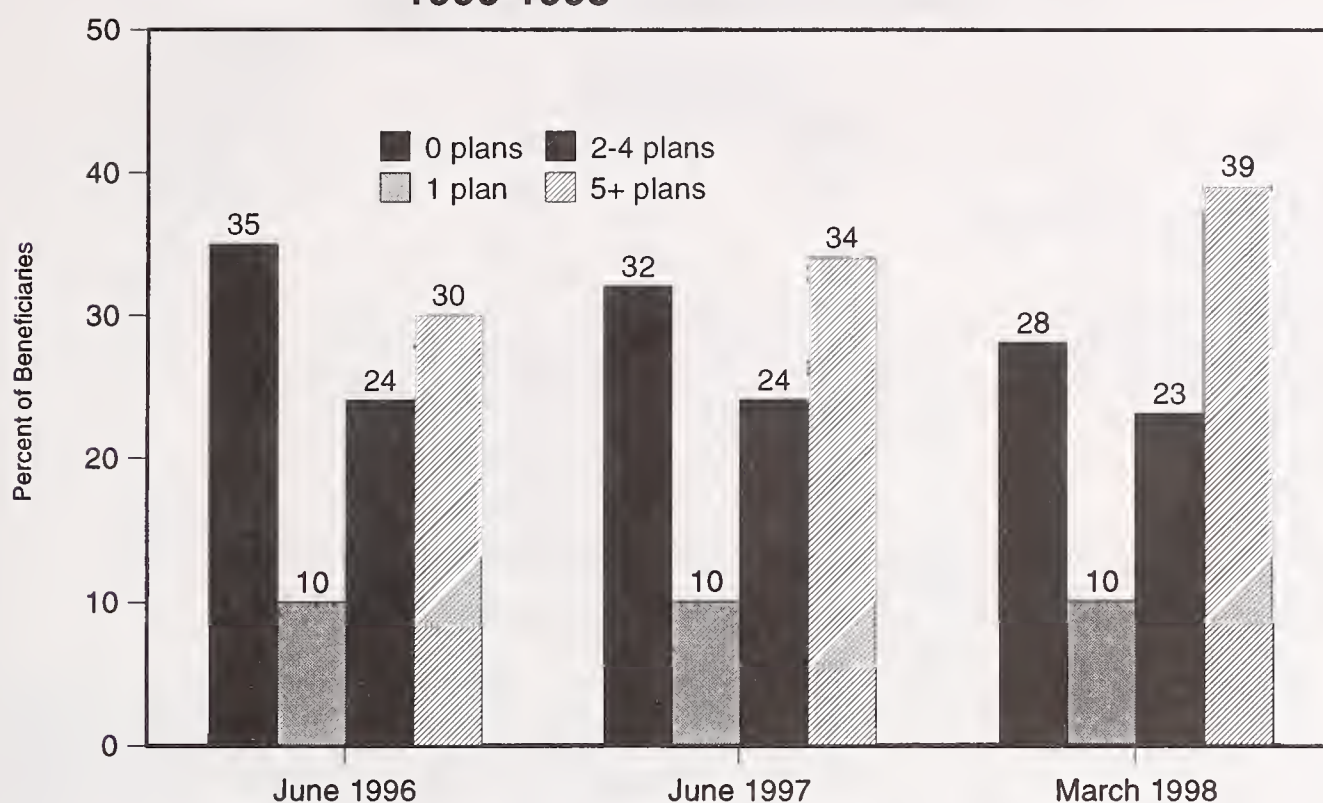
**Chart 2-9. Medicare Risk Plan Service Areas, 1996 and 1998**



SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

Medicare risk plans serve most of the urban areas of the country, and some have expanded to rural counties located just outside of cities. Several plans have left the risk program during this period, leaving central South Carolina and parts of Utah no longer served by any risk plan.

**Chart 2-10. Distribution of Medicare Beneficiaries, by the Number of Risk Plans Available in Their Area, 1996-1998**



NOTE: Area is defined as the zip code in which the beneficiary resides.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

Between 1996 and 1998, the proportion of Medicare beneficiaries with access to at least one risk contract in their area rose from 65 percent to 72 percent. This reflects both entry of new contracts into areas that previously had not had a risk contract and existing contractors' expansion into new service areas. During the same period, the proportion of beneficiaries with access to multiple contracts rose from 54 percent to 62 percent, while the share with access to only one contract stayed constant at 10 percent.



**Chart 2-11. Concentration of Medicare Enrollment in Plans Affiliated With National Firms, 1998**

Sponsor	Firm's Share of National Enrollment		Medicare Share of Firm Enrollment
	Medicare	Total	
PacifiCare	18%	6%	25%
Blue Cross and Blue Shield affiliate	11	18	5
Kaiser Foundation	10	11	7
Humana	8	2	26
United Health Care	7	6	9
Aetna U.S. Health Care	7	6	9
Foundation Health Systems	5	5	9
Oxford Health Plans	3	2	9
CIGNA	2	5	4
Prudential	2	3	5
NYLCare	2	2	8
Total	76	67	—

NOTE: HMO = health maintenance organization.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration and InterStudy.

About 39 percent of Medicare risk enrollees are in a plan associated with PacifiCare, Blue Cross Blue Shield, or Kaiser. Medicare enrollment is somewhat more concentrated among the large national firms than is national HMO enrollment. The recently announced merger of United HealthCare and Humana will concentrate enrollment in Medicare even further.

Medicare as a product line varies in importance among firms, with PacifiCare and Humana most heavily involved.

**Chart 2-12. Relationship Between Medicare Risk Contract Age and Enrollment, 1980-1998**

Year of First Contract	Number of Contracts	Average Enrollment
1980-1989*	52	46,770
1990-1993	41	27,767
1994-1995	76	16,161
1996	59	9,410
1997	69	3,916
1998	48	406

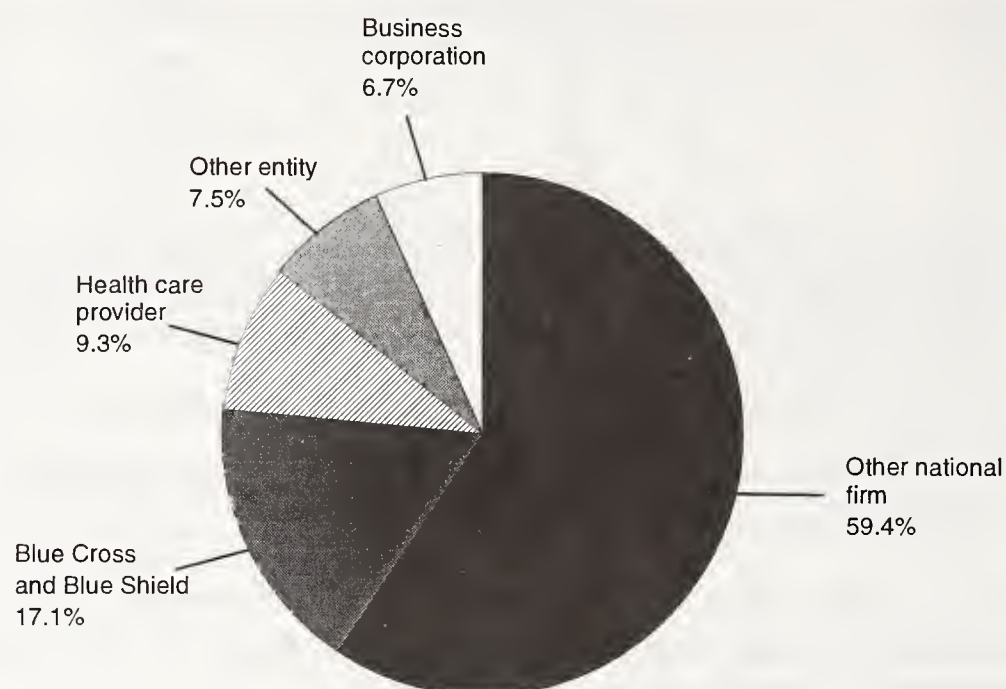
NOTE: InterStudy defines national managed care firms as those that operate health maintenance organizations (HMOs) in two or more states with combined enrollment of at least 10,000 members. An HMO is affiliated with a national firm if it is part of a multi-state network and it receives management services only from a central entity; the degree to which affiliated plans are integrated varies substantially among firms.

\* Includes contracts carried over from before the Tax Equity and Fiscal Responsibility Act (TEFRA) risk contract program.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

It takes several years before plans are able to attract significant numbers of Medicare enrollees. Contracts that were started in 1996 or later account for about half of all risk contracts, but enrollment is heavily concentrated in contracts started in earlier years.

**Chart 2-13. Distribution of HMO Enrollment, by Type of Sponsor, 1997**



NOTE: Survey respondents report HMO sponsorship by selecting among predetermined categories. Enrollment shares reflect the distribution of traditional HMO membership (excluding enrollments in open-ended and fee-for-service products). HMO = health maintenance organization.

SOURCE: Medicare Payment Advisory Commission analysis of data from the *InterStudy Competitive Edge: HMO Industry Report 8.1*.

HMOs are sponsored by or affiliated with large health insurance companies, such as Blue Cross and Blue Shield plans and other national firms; health care providers, like hospitals and physician groups; business corporations; and a variety of other entities, such as universities, cooperatives, or county governments. Traditional health insurers like Blue Cross and Blue Shield plans and other national firms account for the vast majority of total traditional HMO enrollment. Health care provider-sponsored plans represent only a small share of enrollment.



**Chart 2-14. Range of Products and Enrollment Distribution for the Ten Largest National Managed Care Firms, 1997**

National Managed Care Firm	Number of Affiliated Plans	Total Enrollment (In Thousands)	Percent Distribution of Enrollment, by Type of Product					
			Traditional HMO	Open-Ended HMO	Point of Service Plan	Preferred Provider Plan	Managed Fee-for-Service	Non-Prepaid Fee-for-Service
Blue Cross and Blue Shield	85	29,119	37.7%	8.1%	6.8%	34.2%	6.6%	6.6%
United Health Care	38	8,321	50.9	5.4	18.5	18.0	7.3	0.0
Kaiser Foundation	12	8,168	97.7	0.9	0.0	0.0	0.0	1.4
CIGNA	47	6,480	39.7	11.1	18.6	21.4	*	9.1
Prudential	33	4,697	51.9	0.0	38.4	4.1	0.0	5.7
Aetna U.S. Healthcare	27	4,571	72.5	19.4	0.0	0.0	0.0	8.1
PacifiCare	12	4,223	92.0	3.3	*	2.1	*	2.5
Foundation Health Systems	19	3,660	92.1	3.7	1.0	2.8	0.0	0.4
Oxford Health Plans	5	1,744	30.1	69.5	0.0	0.4	0.0	0.0
Humana	13	1,678	99.1	0.9	0.0	0.0	0.0	0.0

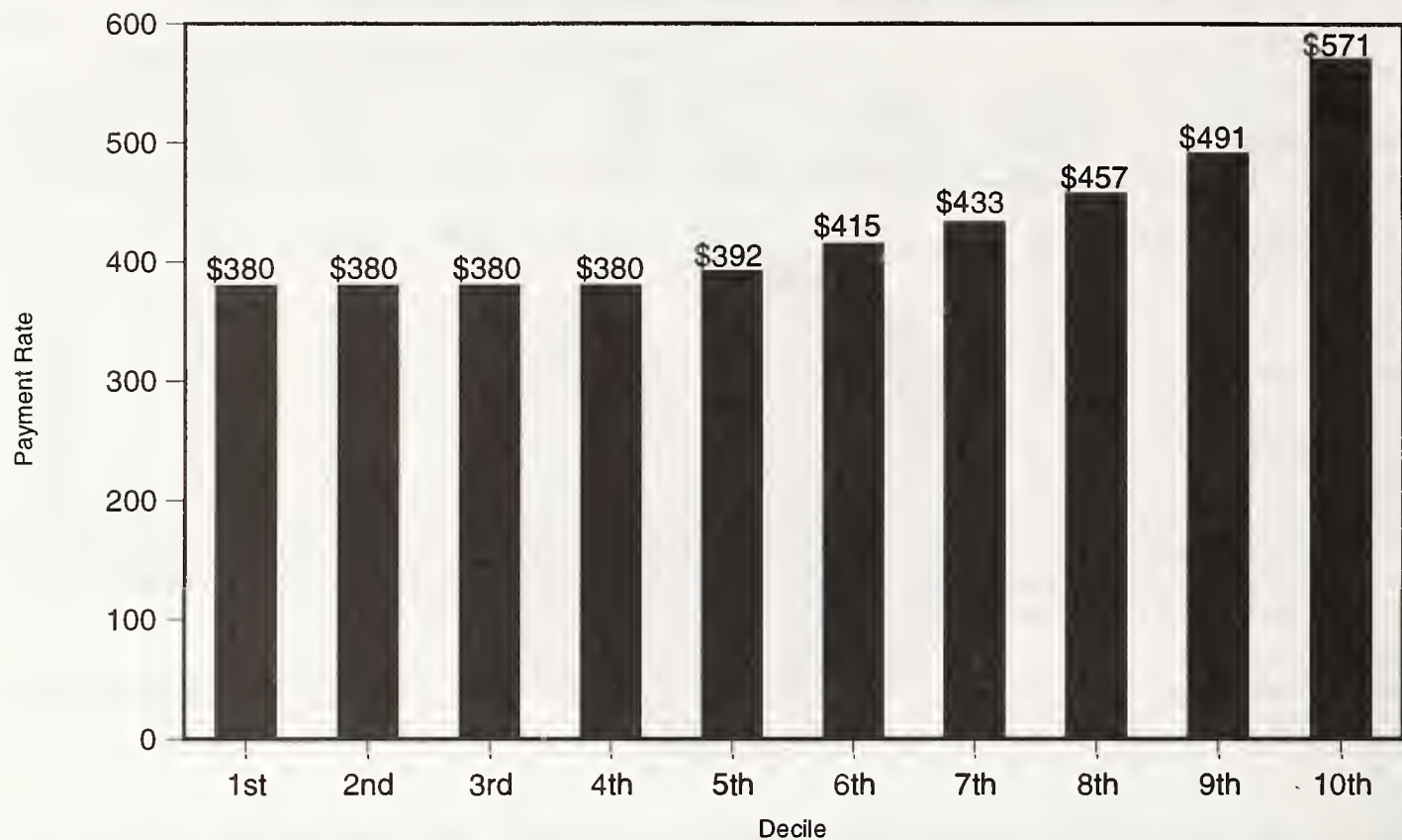
NOTE: InterStudy defines national managed care firms as those that operate health maintenance organizations (HMOs) in two or more states with combined enrollment of at least 10,000 members. An HMO is affiliated with a national firm if it is part of a multi-state network and it receives management services only from a central entity; the degree to which affiliated plans are integrated varies substantially among firms. HMO = health maintenance organization.

\* Less than 0.1 percent.

SOURCE: Medicare Payment Advisory Commission analysis of data from the InterStudy *Competitive Edge: HMO Industry Report 8.1*.

National managed care firms vary widely in the range of health insurance products they offer and in the extent to which they concentrate on specific types of products within that range. Traditional health insurers, such as Blue Cross and Blue Shield plans, CIGNA, and Prudential, have widely diversified product lines. These firms have traditional closed HMO products (in which out-of-plan services are not covered, except for emergency care), an array of open-ended products that cover out-of-plan services with higher coinsurance payments, and non-prepaid fee-for-service plans (in which a self-insured employer pays for services furnished to its employees on a fee-for-service basis, rather than through premiums). Other national firms like Kaiser Foundation plans concentrate only on a few products like traditional HMO plans and an open-ended HMO plans.

**Chart 2-15. Distribution of Medicare+Choice Payment Rates for Aged Beneficiaries, by Decile, 1999**



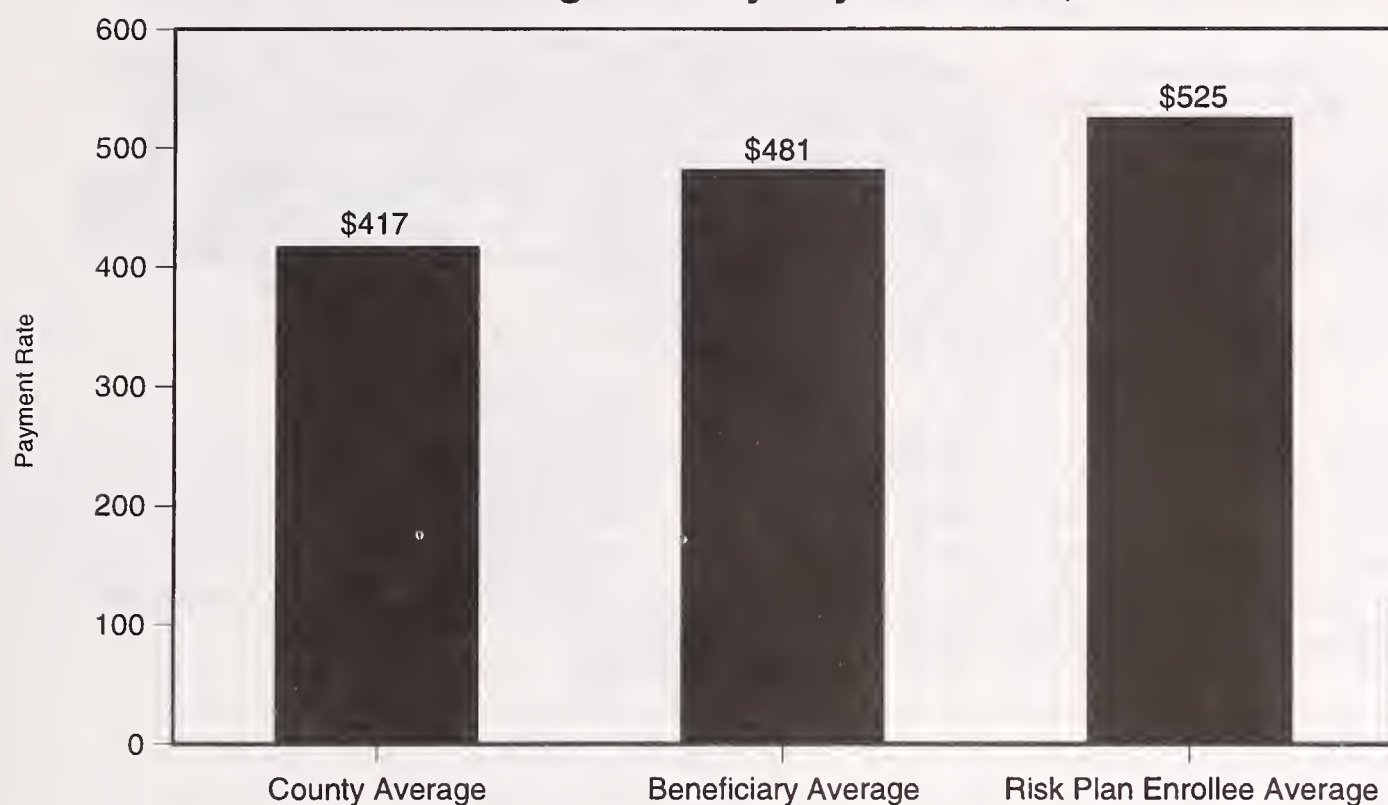
NOTE: Values shown are average for counties sorted by payment rate.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

Medicare pays plans based on the county in which their Medicare enrollees reside. The rates vary by county, reflecting primarily the past distribution of Medicare spending in the traditional program. The 1999 payment rates vary from a low of \$380 (the minimum amount) in over 40 percent of counties to a high of \$800 in Richmond County, New York (Staten Island).

For this chart, counties were ranked on the basis of their 1999 payment rates for aged beneficiaries and sorted into 10 equal-sized groups. The group average payment was then calculated. The rates in the top 10 percent of all counties averaged \$571 per member per month.

**Chart 2-16. Average County Payment Rate, 1998**



NOTE: Average county payment rates are presented with three different weights: counties, beneficiaries and risk plan enrollees as of 1998.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

In 1998, the average county has a payment rate of \$417, while the average beneficiary lives in a county with an average rate of \$481. This difference occurs because payment rates are generally lower in less-populated counties. The highest average of \$525 reflects the location of the average plan enrollee, because more plans are available, and more beneficiaries enroll where payment rates are high.



**Chart 2-17. Characteristics of Counties at 1998  
Medicare+Choice Payment Floor**

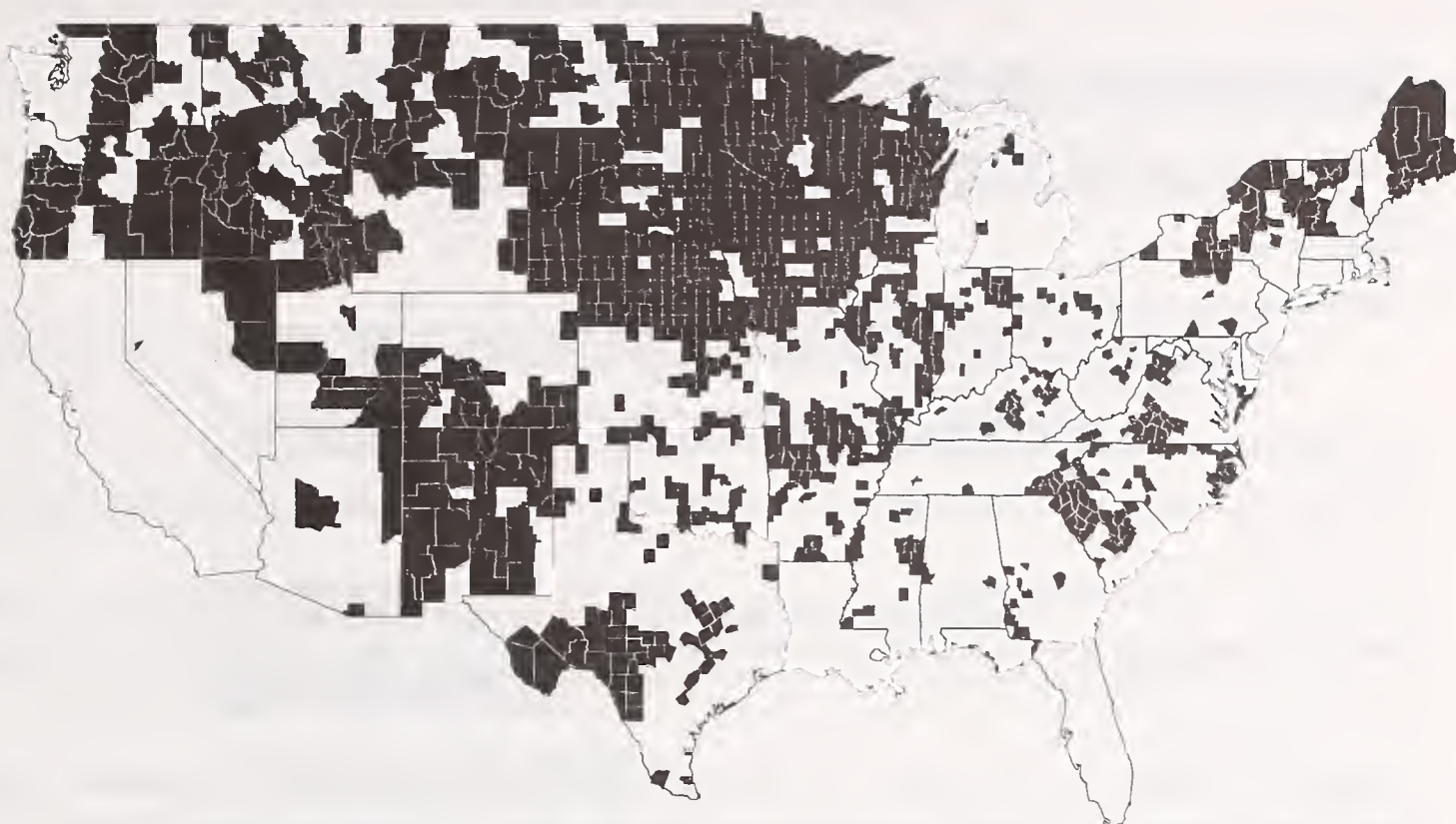
Change in Payment Between 1997 and 1998	Number of Counties	Average Number of:		
		Medicare Eligibles	Risk Enrollees	Commercial HMOs
More than \$75	97	4,144	19	3
\$25-75	377	5,682	114	3
Less than \$25	230	8,026	175	4

NOTE: Counties are considered at payment floor if the sum of Part A and Part B aged payment rates equaled \$367 in 1998. Characteristics are for 1997.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration and InterStudy.

The 1997 Balanced Budget Act created a minimum county payment rate for managed care plans of \$367 in 1998. Characteristics of counties where plans receive the minimum payment amount vary by the amount by which the payment rate was raised between 1997 and 1998, the first year of the floor. Counties with the largest payment increases tended to be those with the fewest Medicare beneficiaries and the smallest number of risk enrollees.

**Chart 2-18. Counties at Payment Floor, 1998**



NOTE: Counties are considered at payment floor if the sum of Medicare Part A and Part B payment rates equalled \$367 in 1998.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration.

Most counties that were assigned the minimum payment rate were rural, and very few had current risk contractors (see Chart 2-9).

## Chart 2-19. Illustrative Risk Adjusted Payment for Selected Enrollees Living in Washington, D.C., 1999

Medicare Part A and Part B risk adjustment factors for selected groups of aged beneficiaries who are non-institutionalized, not working, and ineligible for Medicaid benefits:

<u>Group</u>	<u>Part A</u>	<u>Part B</u>
Men, 65-69	0.65	0.80
Women, 85 and older	1.20	1.00

Unadjusted county payment rates for Washington, D.C. in 1999 are:

Medicare Part A = \$348.66  
Medicare Part B = \$259.08

Plan payment for a 65-year-old man:

county Part A rate  $\$348.66 \times \text{Part A factor } 0.65$  + county Part B rate  $\$259.08 \times \text{Part B factor } 0.80 = \$226.63 + \$207.26 = \$433.87$

Plan payment for an 86-year-old woman:

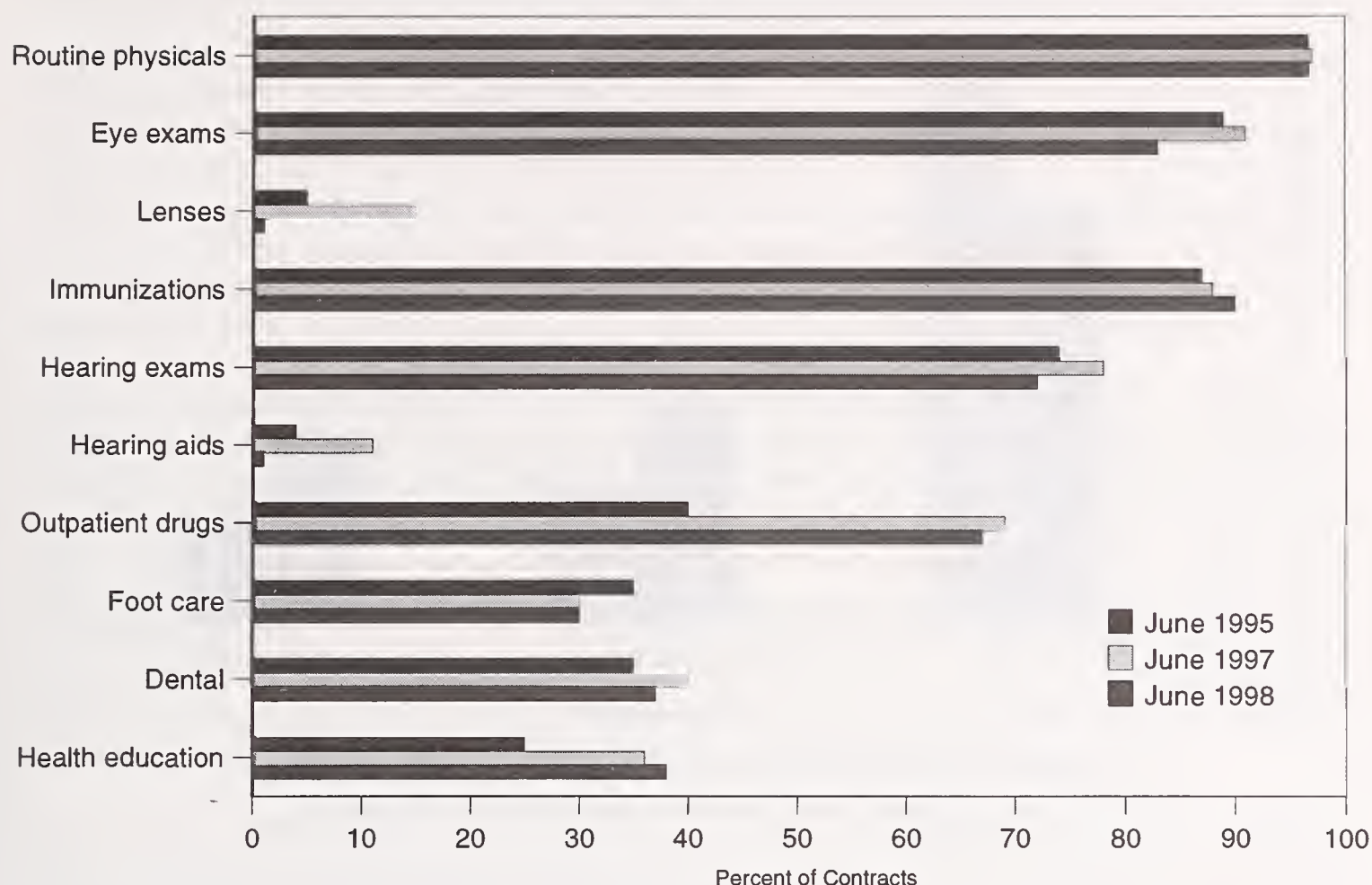
county Part A rate  $\$348.66 \times \text{Part A factor } 1.20$  + county Part B rate  $\$259.08 \times \text{Part B factor } 1.00 = \$418.39 + \$259.08 = \$677.47$

Medicare's payments to a risk plan on behalf of an enrolled beneficiary are risk adjusted to reflect predictable variations in health care spending that are due to differences among beneficiaries. Medicare sets separate unadjusted monthly Part A and Part B payment rates for aged and disabled beneficiaries in each county. (Statewide Part A and Part B rates are set for beneficiaries who have end-stage renal disease.) Separate risk adjustment factors also are developed for each beneficiary group based on beneficiary age, sex, and institutionalization status; adjustment factors for non-institutionalized aged beneficiaries are further broken out for those who are working aged, those who are eligible for Medicaid benefits, and all others.

The risk-adjusted plan payment rate is calculated, as illustrated, by first selecting the Part A and Part B adjustment factors that correspond to the beneficiary's characteristics. These factors are then multiplied by the respective Part A and Part B unadjusted payment rates for the beneficiary's county of residence. The resulting products are then added to obtain the adjusted payment rate.



**Chart 2-20. Medicare Risk Contracts Offering Additional Benefits in Their Basic Option Package, Selected Years (In Percent)**

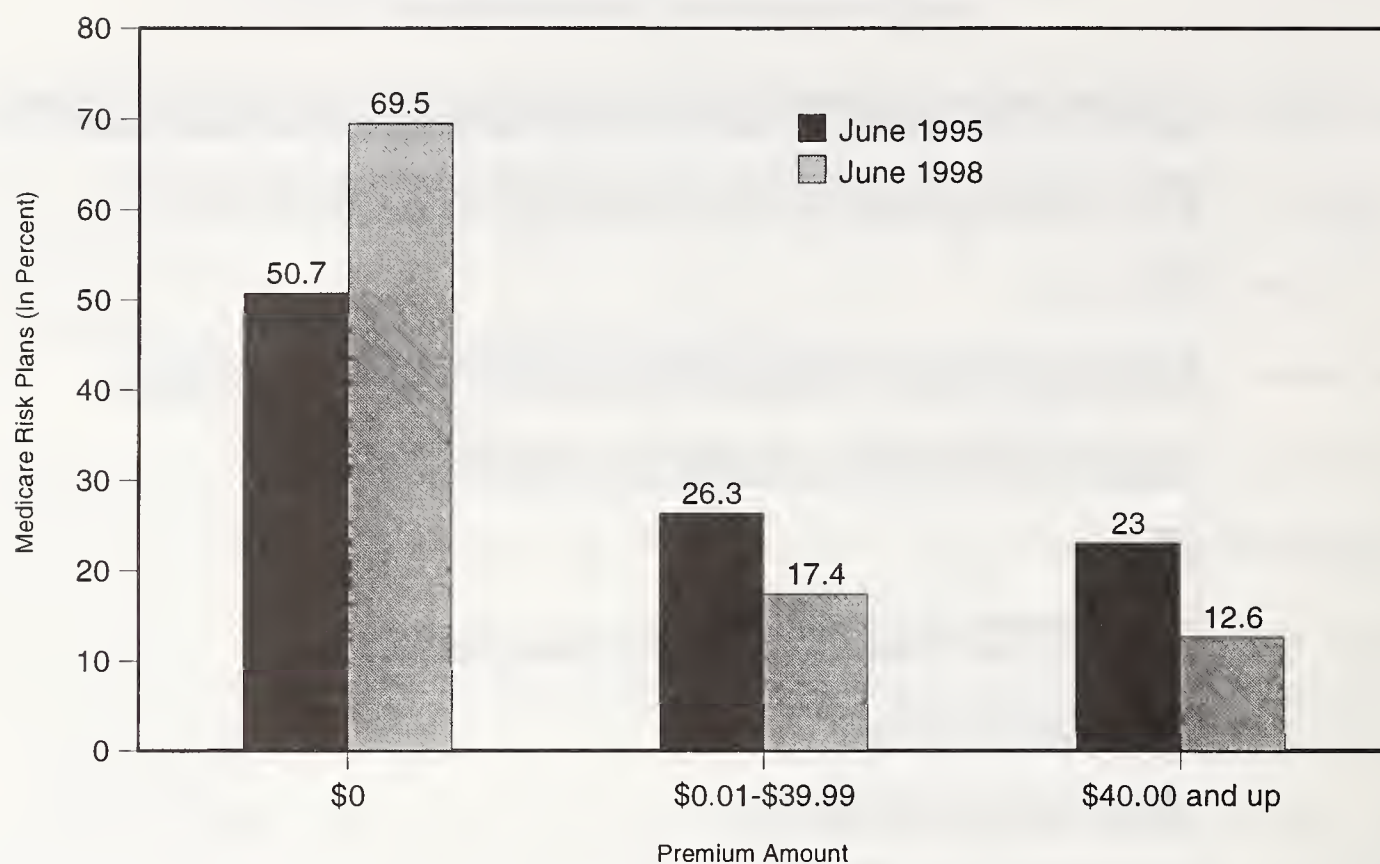


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Managed Care Contract Reports.

Nearly all plans offer some additional benefits to enrollees beyond those in the standard Medicare benefit package. Most widely available are routine physicals, eye exams, and immunizations. About two-thirds of plans offer outpatient drugs as an additional benefit in their basic package. Compared with 1995, more plans are offering benefits in health education, but there have been slight declines in the share of plans offering eye exams and lenses, and hearing aids and exams.

This display of benefits does not indicate the value of the additional benefits offered. For example, although more plans may be offering coverage of outpatient drugs, the limits on coverage or the required copays may have changed.

**Chart 2-21. Distribution of Medicare Risk Contracts, by Premium Amount, 1995-1998**



NOTE: Premium amounts are for basic option packages.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Managed Care Contract Reports.

Risk plans charge different premiums to enrollees. Nearly 70 percent of plans in June 1998, however, charged no premium for their basic package. This represents a nearly 20 percentage point increase in the share of zero-premium plans. Many plans also offer some type of high-option package in addition to their basic package and usually charge higher premiums for them.

## HOSPITAL PAYMENTS, COSTS, AND MARGINS

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As health care delivery and financing evolves through the 1990s and into the next century, the hospital continues to be a central element of that system. Although the proliferation of alternative sites of acute, sub-acute, and post-acute care has altered their role, hospitals still account for a larger share of national health expenditures (almost 35 percent in 1996) than any other type of provider. Moreover, hospitals and other providers increasingly are entering into relationships that link their provision of health care and also their financial performance. Therefore, how hospitals respond to their changing environment is of interest not only because they are the largest component of the health care system, but also because they more and more are related to the other components.

This chapter begins with a description of operating payments and costs under Medicare's prospective payment system (PPS) for hospital inpatient services. PPS was implemented to slow the increase in Medicare spending, and it has done so. After an initial jump in the first two years of PPS, payments per case have risen at a fairly moderate rate for the past decade or more.<sup>1</sup> It was also hoped that hospitals would have an incentive to constrain their costs. PPS alone could not accomplish that, with operating costs per case increasing at historically high rates for most of the 1980s; however, with additional pressure from private payers, cost growth has declined sharply, with operating costs per case in fact declining in 1994 and 1995. The chapter examines the Medicare hospital inpatient (operating plus capital) PPS margin to see how PPS payments and costs compare in any year, and how these patterns differ both across and within hospital groups.

The chapter next looks at the overall revenues and expenses of hospitals. They tend to fluctuate together, with fairly high increases through the 1980s and sharp decelerations in recent years. Data through the first part of 1998 indicate that this trend is continuing. Hospitals appear to be successfully responding to increased pressure from payers and maintaining their total hospital margin, which compares total hospital revenues and expenses. The pattern of total margins, however, is very different from that of PPS margins. This may be the result of Medicare payment policies that provide subsidies for certain types of hospitals that are seen as being more vulnerable to losses from other groups of patients.

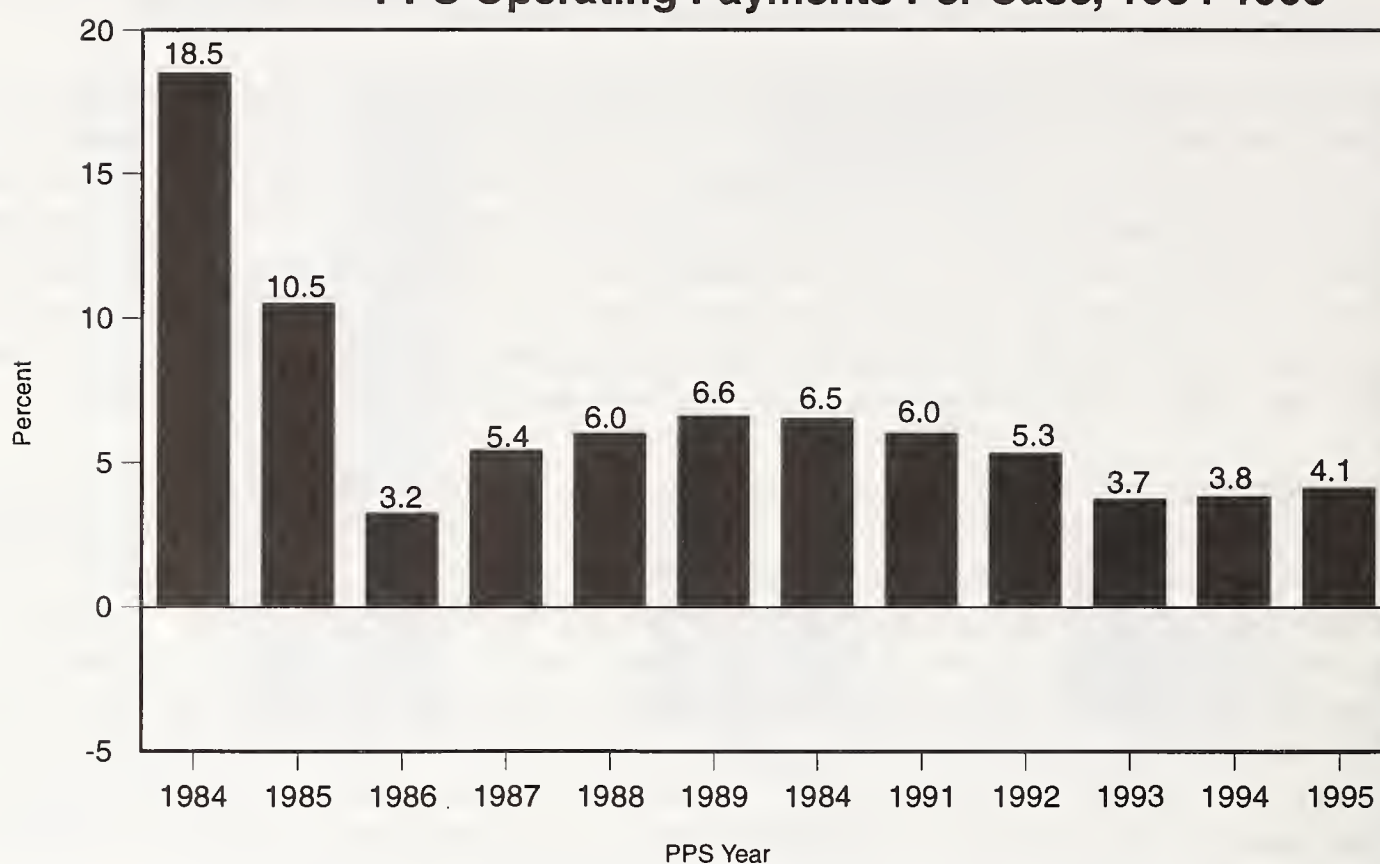
The chapter concludes with an examination of the relationship between the payment policies of different payers for hospital care. Patterns of payments and costs by payer category are described over time and for different groups of hospitals. These data indicate that different hospitals may face different circumstances with regard to their ability to maintain their financial condition because of the mix of patients they treat and the entities that pay for their services.

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<sup>1</sup> PPS years refer to hospitals' cost reporting periods beginning during the corresponding federal fiscal year.



**Chart 3-1. Annual Change in Medicare Hospital Inpatient PPS Operating Payments Per Case, 1984-1995**



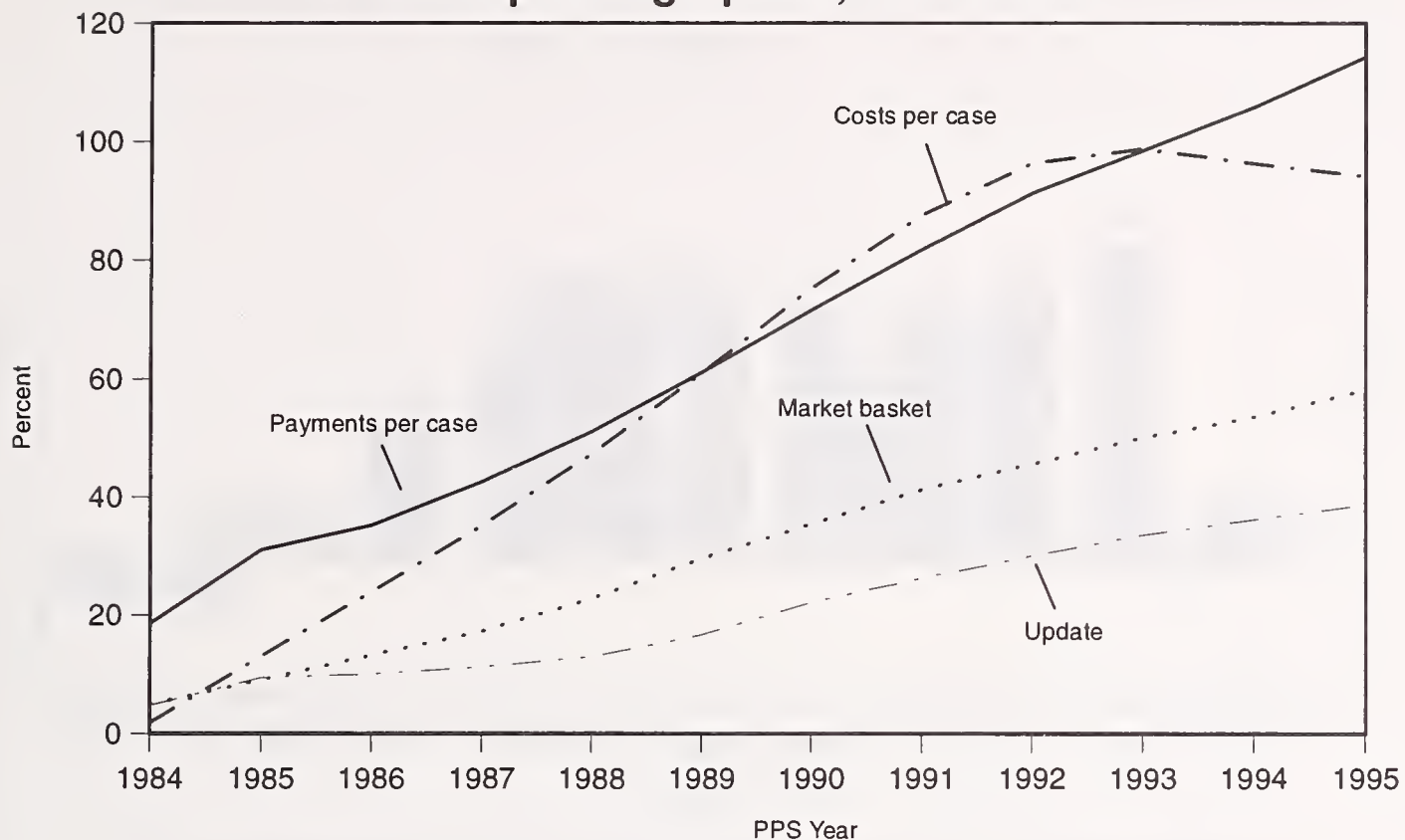
SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

In the first two years of Medicare's hospital inpatient operating prospective payment system (PPS), payments per case jumped 18.5 percent and 10.5 percent, respectively. This was due to several factors. First, the hospital-specific costs on which the initial rates were partially based were overestimated due to the use of unaudited Medicare Cost Reports. Second, the shift of less complex cases from inpatient acute care to other settings resulted in an increase in average complexity (and, under PPS, average payment) that was larger than anticipated. Third, because the measured complexity of (and payment for) each case was now based on the information coded on the patient record, hospitals placed more emphasis on the accuracy and completeness of that information; this phenomenon, called "upcoding," resulted in higher payments per case.

When these data became available, the Congress responded by lowering the update applied to the PPS operating payment rates, and operating payments rose by only 3.2 percent in the third year. After that, operating payments per case grew steadily at between 5.3 percent and 6.6 percent. From 1993 through 1995, operating payments per case increased at a steady, but lower, rate of between 3.7 percent and 4.1 percent.

Although more current data are not available, this trend is expected to have continued through fiscal year 1997. With the implementation of the Balanced Budget Act of 1997, the rise in PPS payments per case will slow considerably.

**Chart 3-2. Cumulative Changes in Medicare Hospital Inpatient PPS Operating Payments and Costs Per Case, Hospital Market Basket Index, and PPS Operating Update, 1984-1995**



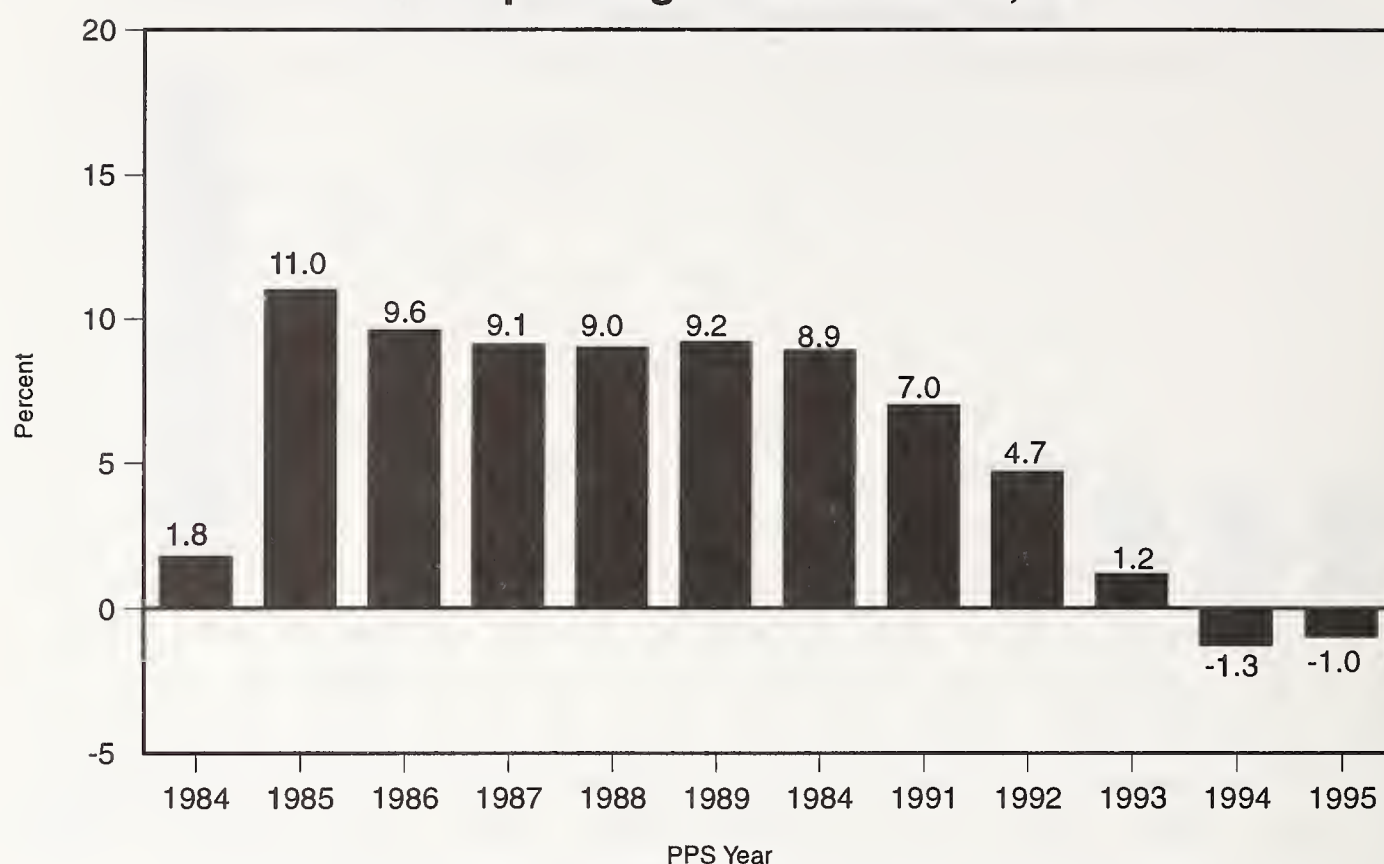
NOTE: Annual increases in hospital market basket index and payment rates are for the corresponding federal fiscal year.

SOURCE: Medicare Payment Advisory Commission.

The annual update applied to PPS operating payment rates has been below the actual increase in the PPS hospital market basket (which measures the prices of resources hospitals purchase in providing inpatient care) in almost every year. But the growth of PPS operating payments per case has been well above both the update and the market basket. This is due primarily to increases in the measured complexity of Medicare cases treated in the hospital (case mix).

Nonetheless, operating costs per case rose at a substantially higher rate through the 1980s, with the cumulative increase in costs surpassing that of payments in 1990. In the early 1990s, this trend reversed, with the cumulative increase in payments again exceeding that of costs beginning in 1993.

**Chart 3-3. Annual Change in Medicare Hospital Inpatient PPS Operating Costs Per Case, 1984-1995**



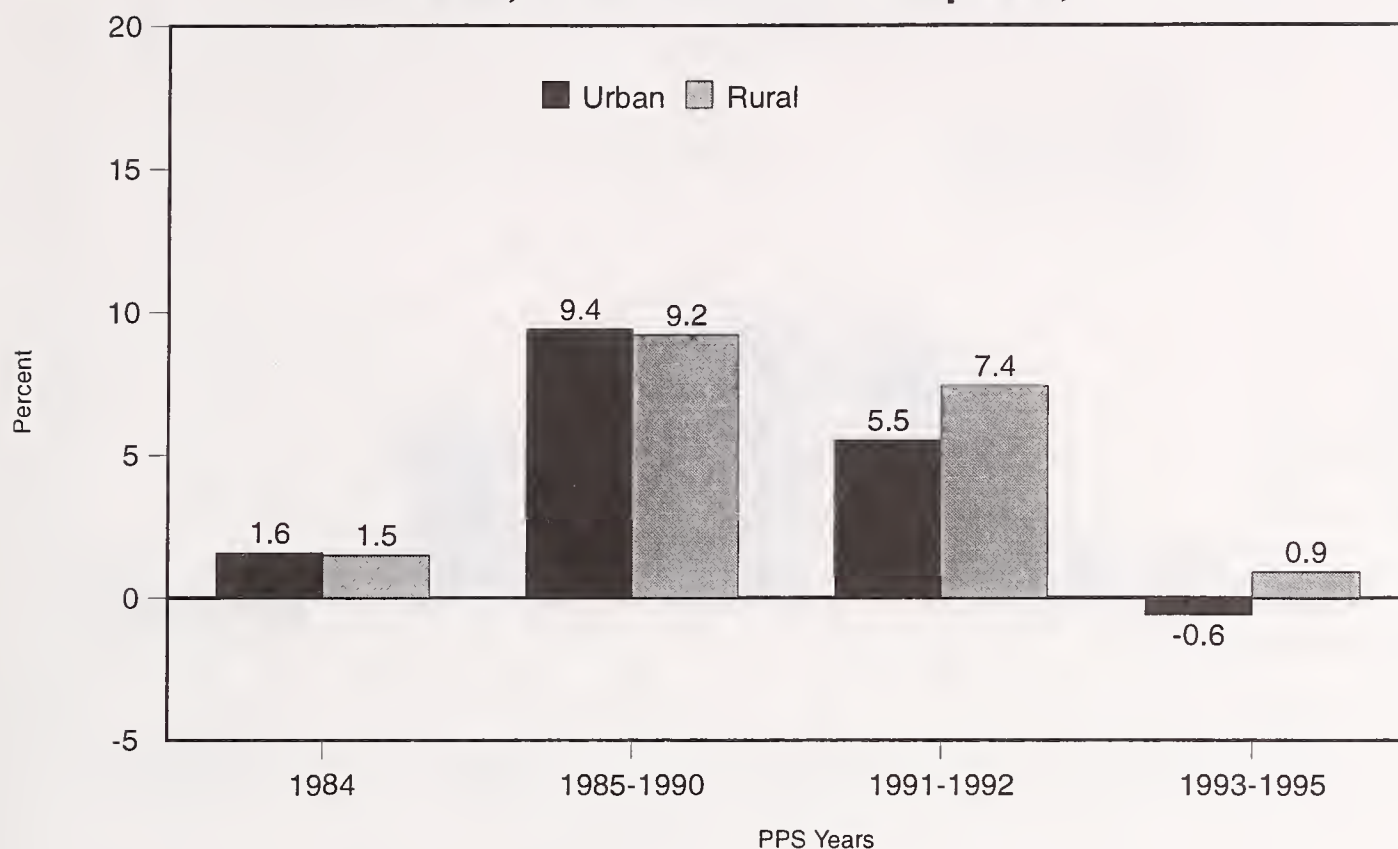
SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The pattern of annual changes in PPS operating costs per case differs from that for PPS operating payments. In the first year, while payments per case were increasing by 18.5 percent (see Chart 3-1), costs per case were rising by only 1.8 percent. This was due primarily to hospitals' anticipation of growing pressure on payment levels under the new system.

With the initially high payments under PPS and the availability of additional revenues from other sources (see Chart 1-10), hospital costs resumed their historically high rates of increase. From 1985 through 1990, PPS operating costs per case rose at a rate of 9.5 percent per year. Hospital cost growth began to slow in 1991, to 7.0 percent, and there has been an aggregate decrease in PPS operating costs per case since 1993.



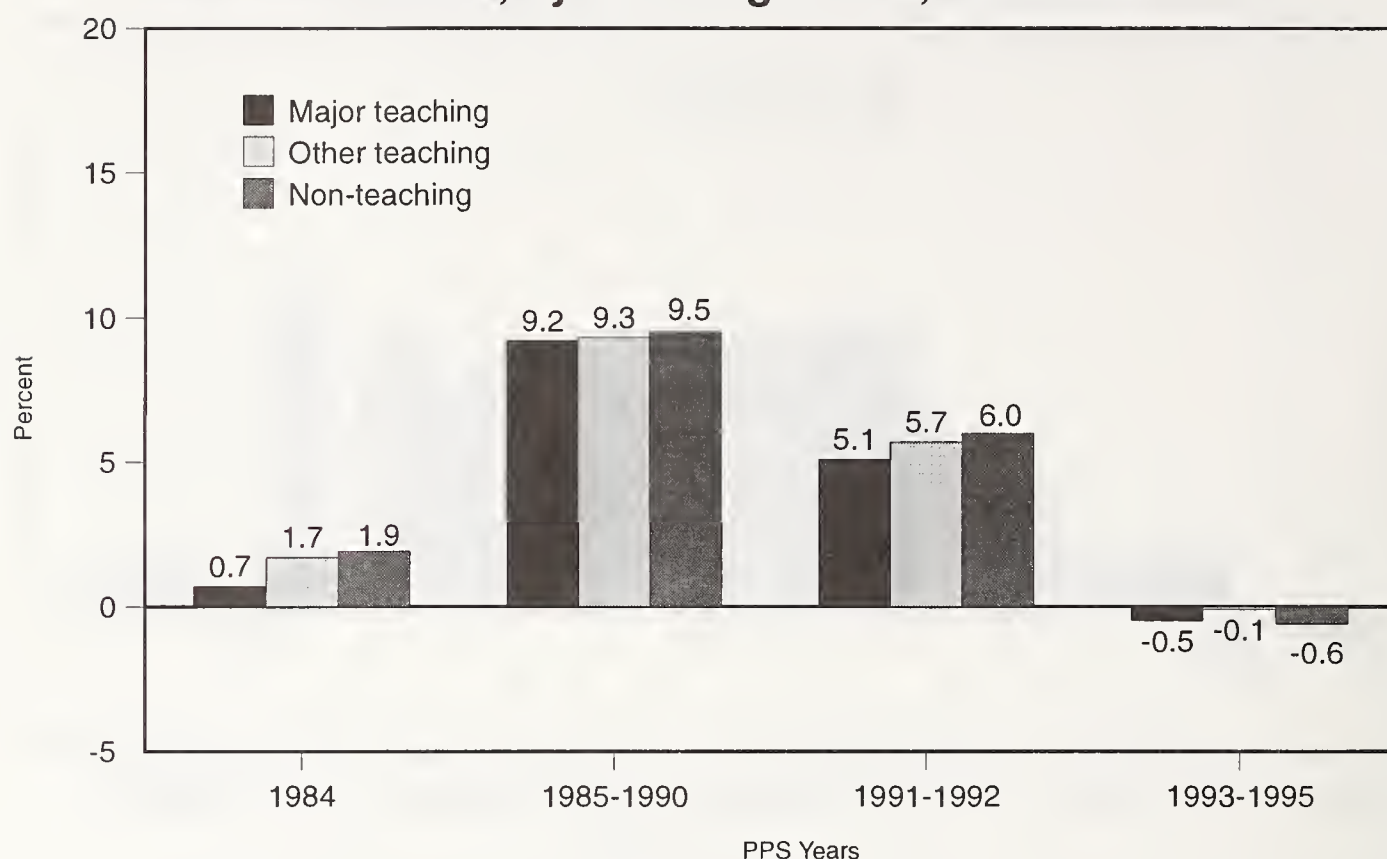
**Chart 3-4. Average Annual Change in Medicare Hospital Inpatient PPS Operating Costs Per Case, Urban vs. Rural Hospitals, 1984-1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The pattern of hospital cost growth varies by type of hospital. Through the 1980s, operating costs per case rose at about the same rate at urban and rural hospitals. In the 1990s, however, although sharply slower cost increases have been achieved by both groups, the rate for urban hospitals is 1.5 to 2 percentage points lower.

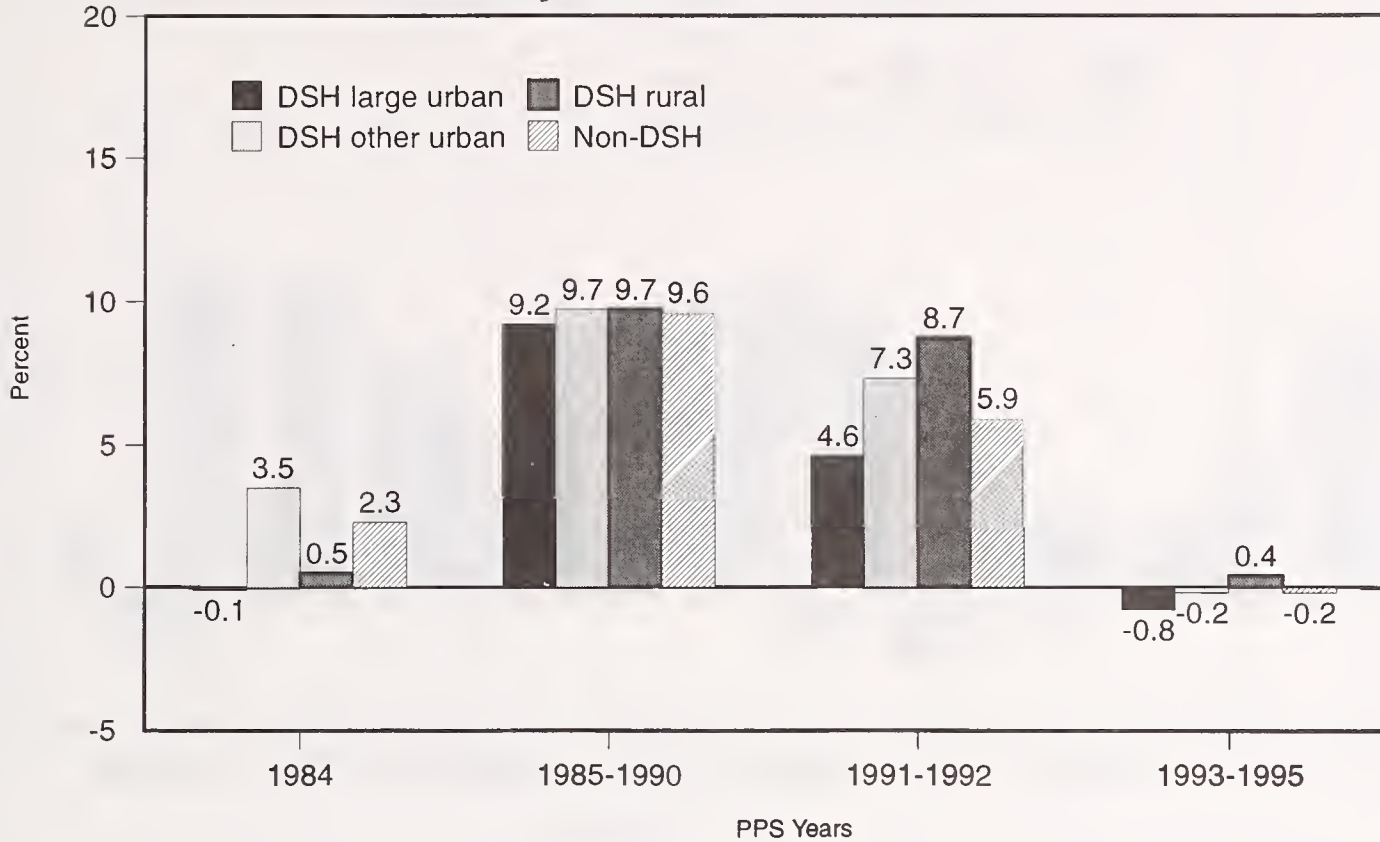
**Chart 3-5. Average Annual Change in Medicare Hospital Inpatient PPS Operating Costs Per Case, by Teaching Status, 1984-1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Major teaching hospitals (hospitals with at least 0.25 residents per bed) have been somewhat more successful in controlling their costs since PPS began, particularly in the first year and in the early 1990s. More recently, however, although again there have been decreases in operating costs per case among both teaching and non-teaching hospitals, there has been no difference between the major teaching and non-teaching groups.

**Chart 3-6. Average Annual Change in Medicare Hospital Inpatient PPS Operating Costs Per Case, by DSH Status, 1984-1995**



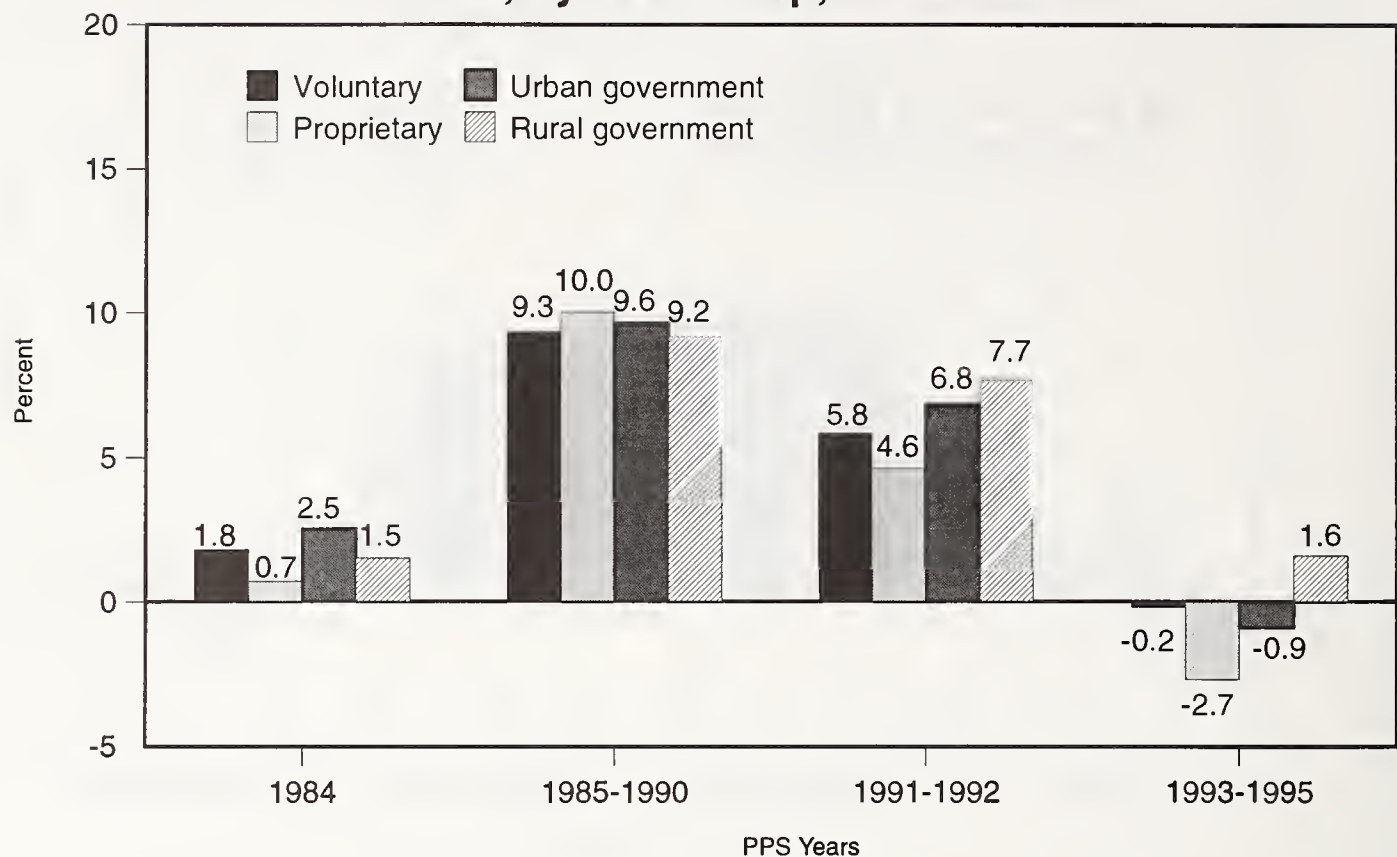
NOTE: DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Hospitals in large urban areas (with populations of 1 million or more) that treat a disproportionate share of poor patients consistently have held their cost growth below that of non-disproportionate share hospitals. In 1991 and 1992, operating costs per case at disproportionate share hospitals in large urban areas rose at a rate almost 1.5 percentage points slower than for non-disproportionate share hospitals, and from 1993 through 1995 the difference between these two groups was 0.6 percentage points.



**Chart 3-7. Average Annual Change in Medicare Hospital Inpatient PPS Operating Costs Per Case, by Ownership, 1984-1995**



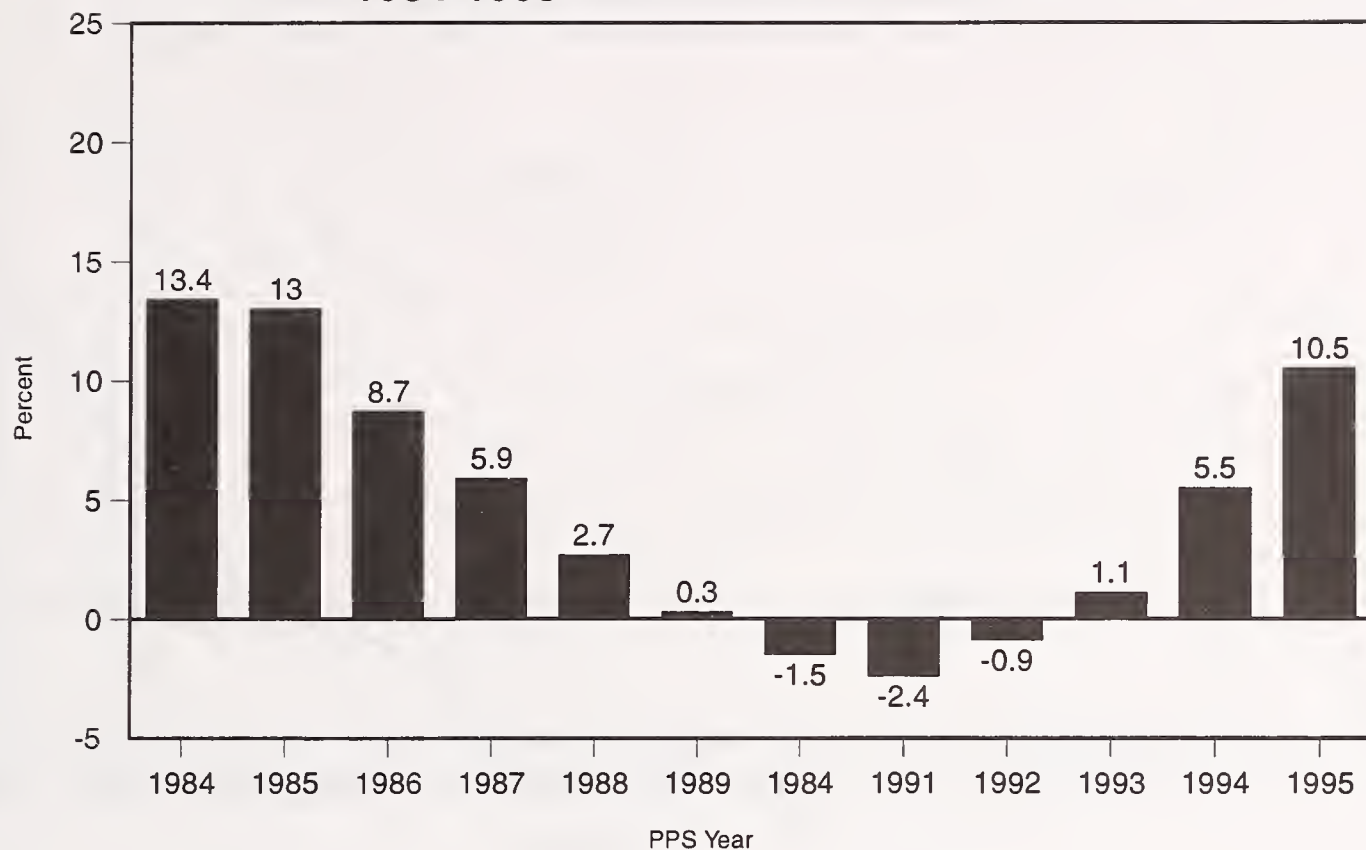
NOTE: DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

In the first year of PPS, when hospitals anticipated considerable pressure from the new system, proprietary hospitals held their cost growth below that of other ownership categories. For the remainder of the 1980s, however, when hospitals were able to obtain additional revenues from private payers, proprietary hospitals experienced larger cost increases than any other group.

During the 1990s, as hospitals have been feeling more pressure from private payers, proprietary hospitals have responded again by holding their costs down. From 1993 through 1995, operating costs per case at proprietary hospitals fell at an annual rate of 2.7 percent, 2.5 percentage points lower than for voluntary hospitals.

**Chart 3-8. Medicare Hospital Inpatient PPS Margins, 1984-1995**

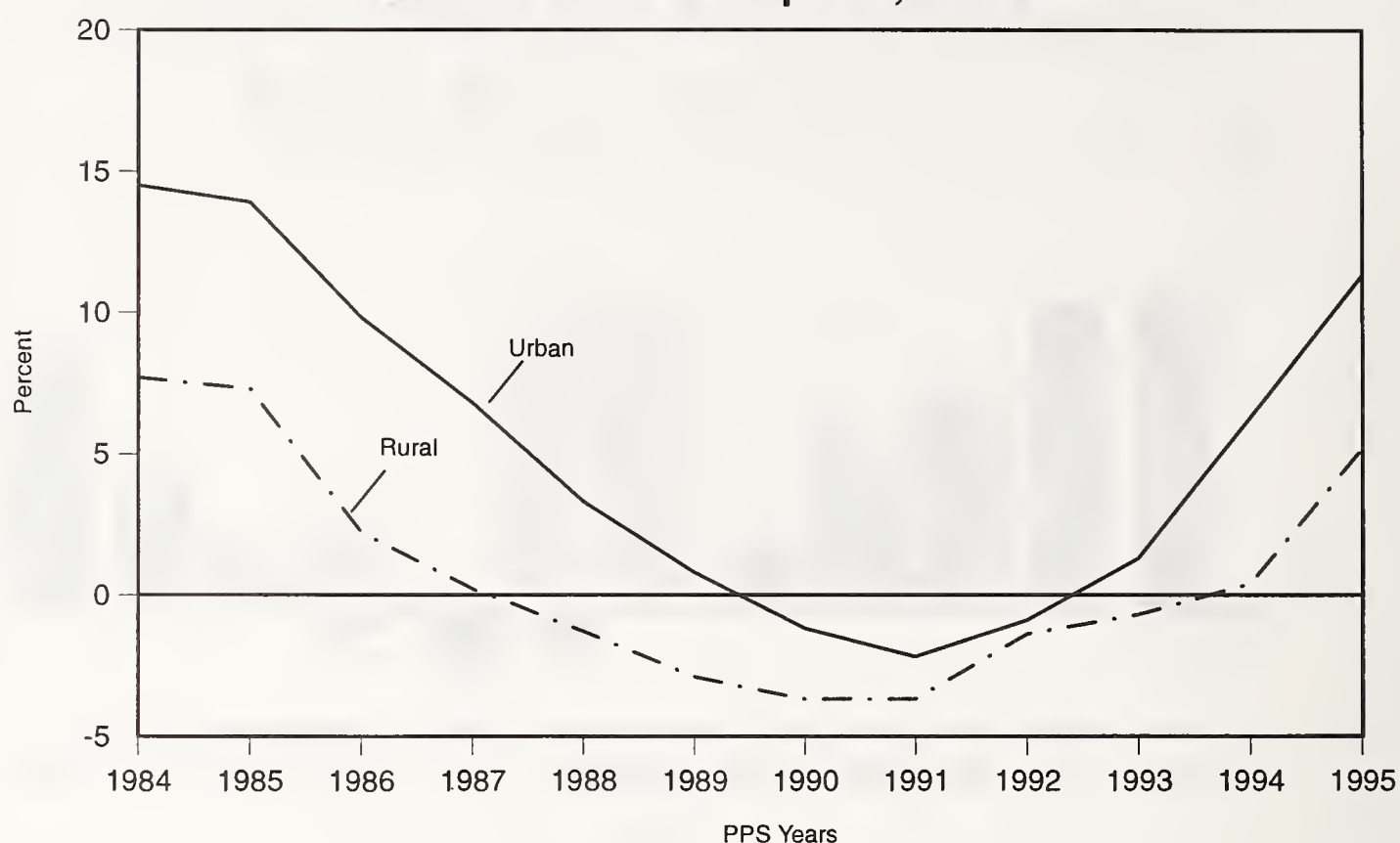


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The trend in the PPS margin reflects the changes in cost growth over time. In the early years of PPS, the margin was at or above 13 percent, due to large payment increases in the first two years and a temporary reduction in cost growth in the first year. As costs rose at their historical rate throughout the remainder of the 1980s, the PPS margin steadily fell, dropping below zero in 1990 and to -2.4 percent in 1991.

With the recent decline in cost growth since the early 1990s, the PPS margin has risen sharply, becoming positive again in 1993 and jumping to 10.5 percent in 1995. MedPAC estimates that, given recent changes in PPS payment rates (including the effects of the Balanced Budget Act of 1997) and more current data on hospital cost growth, the PPS margin for 1998 will be 15.9 percent.

**Chart 3-9. Medicare Hospital Inpatient PPS Margin, Urban vs. Rural Hospitals, 1984-1995**



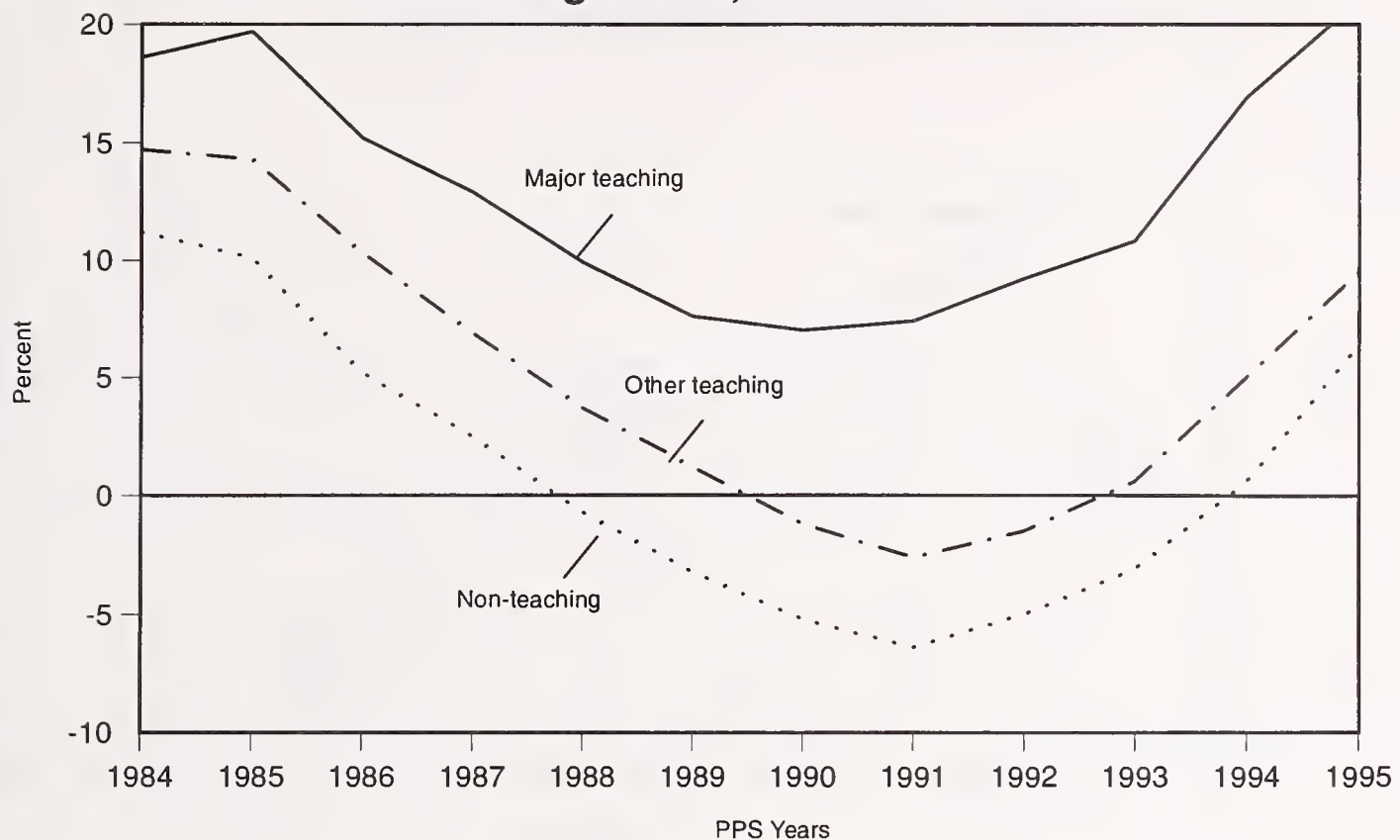
SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The PPS margin for urban hospitals was almost 7 percentage points higher than that for rural hospitals in the first year of PPS. Beginning in 1988, a series of policy changes designed to narrow that discrepancy brought PPS margins for urban and rural hospitals closer together; by 1992, although both margins were below zero, they were within 0.5 percentage points of each other.

With the slower cost growth among urban hospitals since the early 1990s, the spread between the two PPS margins has increased. By 1995, the PPS margin for urban hospitals again was more than 6 percentage points higher than for rural hospitals.



**Chart 3-10. Medicare Hospital Inpatient PPS Margin, by Teaching Status, 1984-1995**

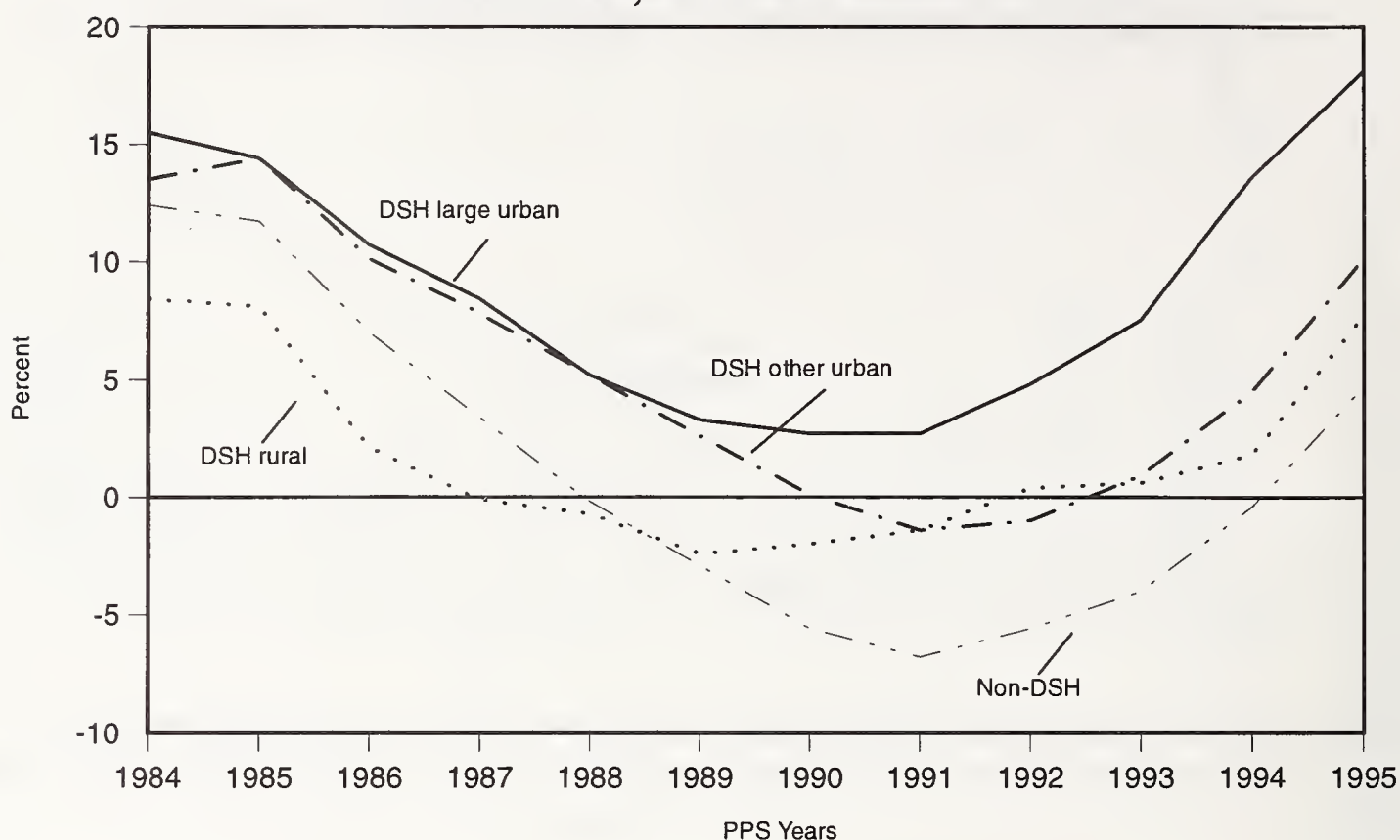


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Major teaching hospitals consistently have had a higher PPS margin than other teaching hospitals and non-teaching hospitals, because of the additional payments they receive under the indirect medical education and disproportionate share adjustments under PPS. In the first year of PPS, major teaching hospitals had a PPS margin almost 4 percentage points higher than that for other teaching hospitals and more than 7 percentage points higher than that for non-teaching hospitals.

With sharp increases in the PPS disproportionate share adjustment in the Omnibus Budget Reconciliation Acts (OBRA) of 1989 and 1990, the PPS margin for major teaching hospitals rose sharply relative to those for the other groups. By 1995, major teaching hospitals had a PPS margin of 21.0 percent, compared with 9.5 percent for other teaching hospitals and 6.4 percent for non-teaching hospitals.

**Chart 3-11. Medicare Hospital Inpatient PPS Margin, by DSH Status, 1984-1995**

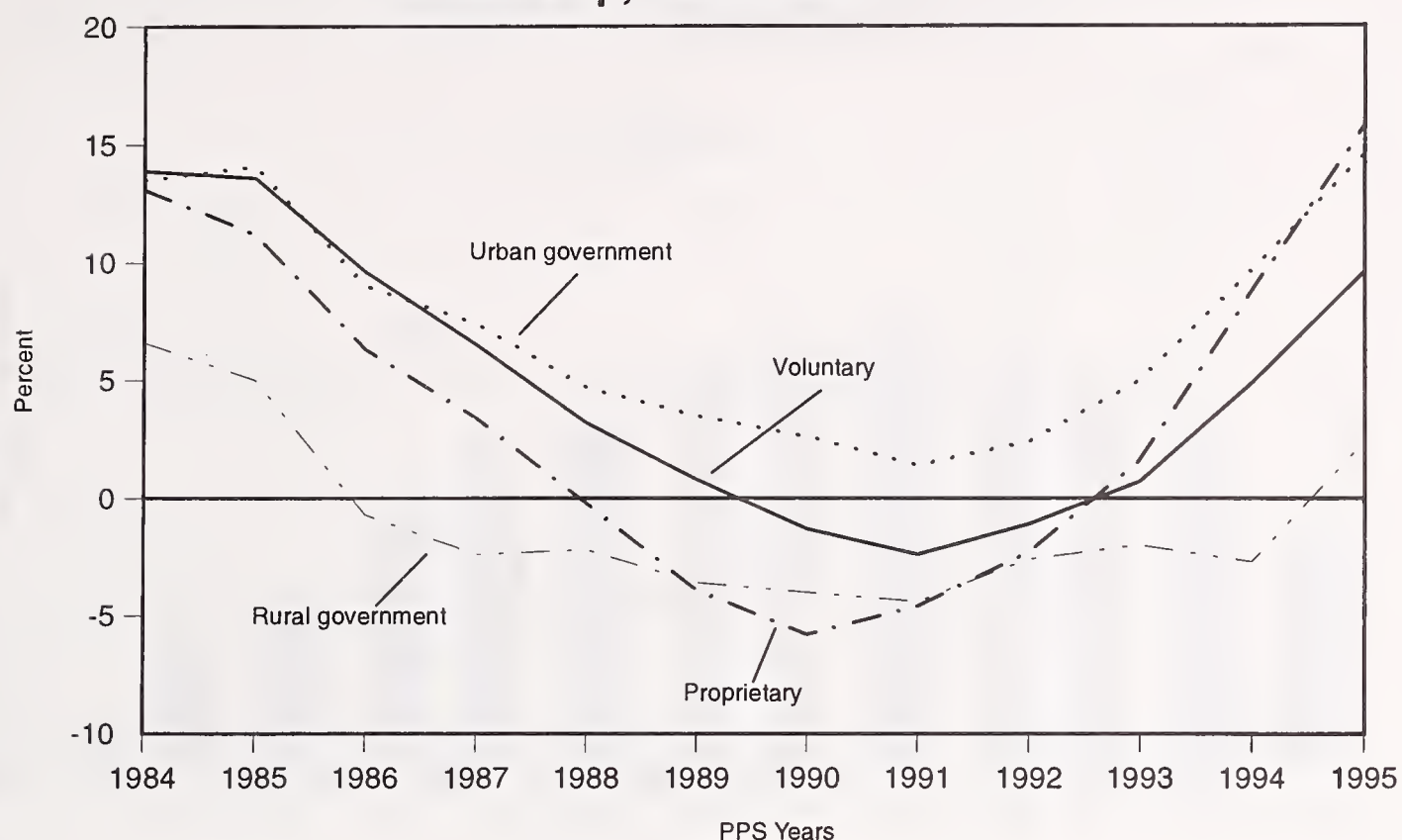


NOTE: DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Disproportionate share hospitals in large urban areas (about 20 percent of which are major teaching hospitals) also have had a higher PPS margin than other groups of hospitals. The spread between these groups has widened, however. In 1984, disproportionate share hospitals in large urban areas had a PPS margin of 15.5 percent--more than 3 percentage points higher than that for non-disproportionate share hospitals. By 1995, the disproportionate share large urban group had a PPS margin of 18.1 percent--almost 14 percentage points higher than for the non-disproportionate share group. This trend also reflects the OBRA 1989 and OBRA 1990 increases in the disproportionate share adjustment.

**Chart 3-12. Medicare Hospital Inpatient PPS Margin, by Ownership, 1984-1995**



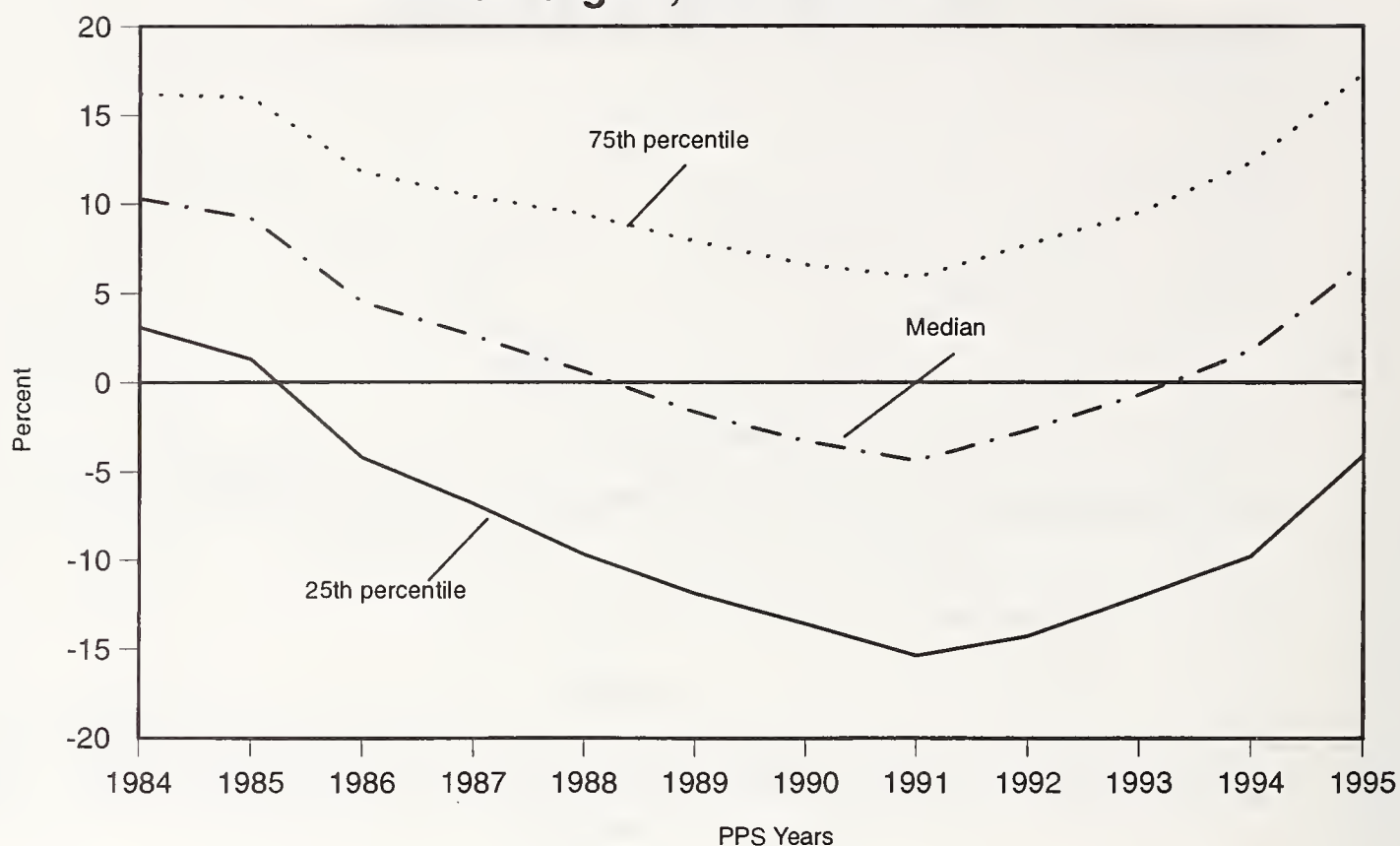
SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Among ownership categories, rural government hospitals generally have had the lowest PPS margin, while urban government hospitals have had the highest or close to it. In 1995, urban government hospitals had a PPS margin of 14.6 percent, while rural government hospitals had a margin of 2.4 percent. This is consistent with differences in cost growth between the two groups.

The trend for proprietary hospitals strongly reflects cost growth. In 1984, proprietary hospitals had a PPS margin of 13.1 percent, slightly below the margin for all hospitals. By 1990, the proprietary group had a PPS margin of -5.8 percent--more than 4 percentage points below the figure for all hospitals, and a drop of almost 19 percentage points in 6 years. With greater cost constraint in the 1990s, proprietary hospitals improved their PPS margin to 15.8 percent--higher than any other ownership category, and almost 22 percentage points higher than in 1990.



**Chart 3-13. Distribution of Medicare Hospital Inpatient PPS Margins, 1984-1995**

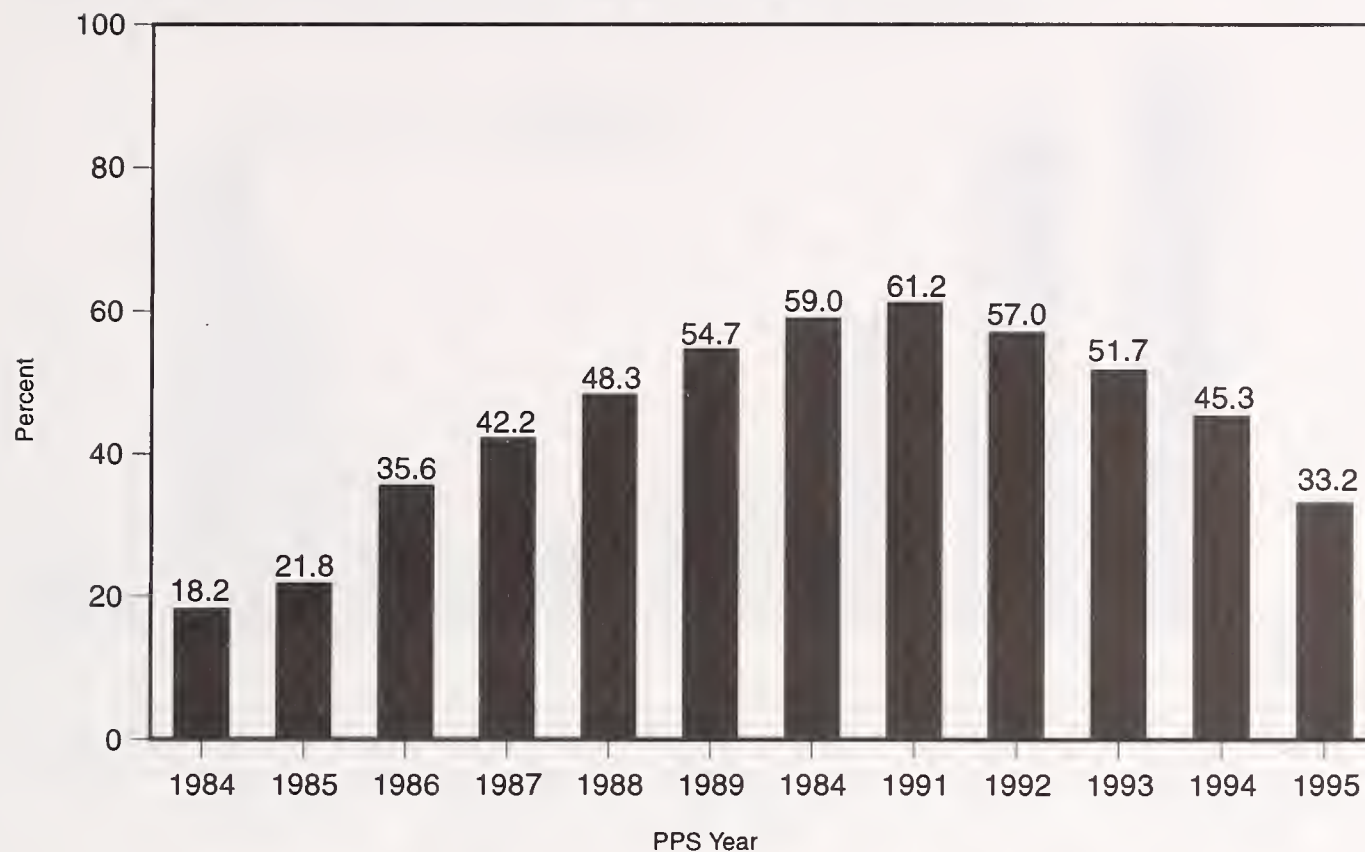


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The distribution of PPS margins across individual hospitals has reflected the aggregate margin at each point in time, starting out relatively high in 1984, falling through 1991, and rising again through 1995. The dispersion of margins has widened considerably, however, since PPS began. In 1984, one-quarter of all hospitals had PPS margins of at least 16.2 percent, while an equal number had PPS margins below 3.1 percent. By 1991, the margin at the lowest quartile had fallen to -15.4 percent, while the highest had fallen only to 5.9 percent. The gap between these two groups, then, had increased from 13.1 percentage points to 21.3 percentage points.

More recently, this gap has held fairly steady. By 1995, the top quarter of all hospitals had PPS margins of 17.3 percent or more, while the bottom quarter had PPS margins below 4.1 percent--a spread of 21.4 percentage points.

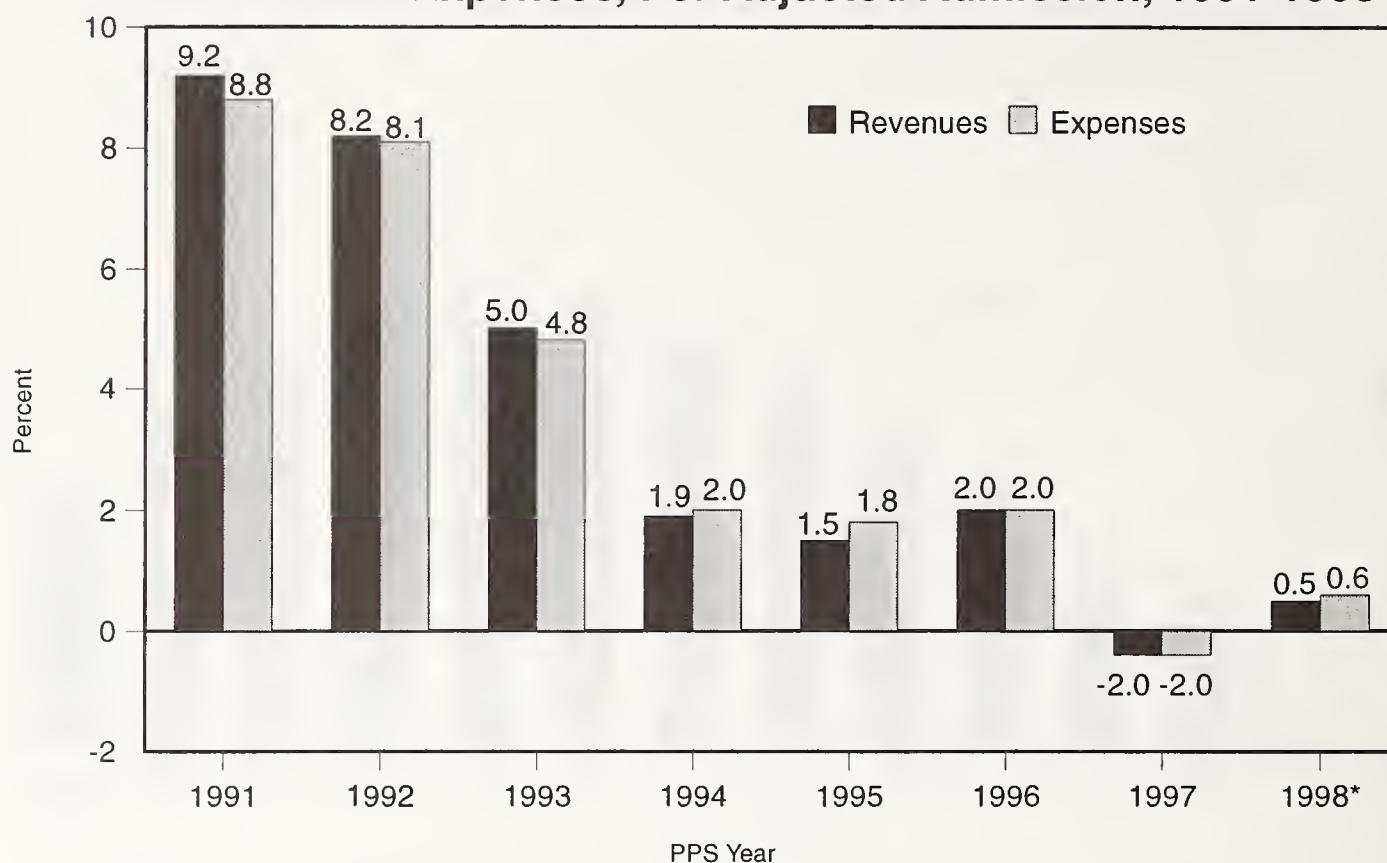
**Chart 3-14. Percent of Hospitals With Negative Medicare Inpatient PPS Margins, 1984-1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Despite the sharp increase in the aggregate PPS margin, 33.2 percent of all PPS hospitals had negative margins. This, however, was the lowest such percentage in ten years, representing the fourth consecutive decline and a decrease from a peak of 61.2 percent in 1991.

**Chart 3-15. Annual Change in Hospital Total Revenue and Expenses, Per Adjusted Admission, 1991-1998**



\* Based on change through February 1998 compared with the same period in the previous year.

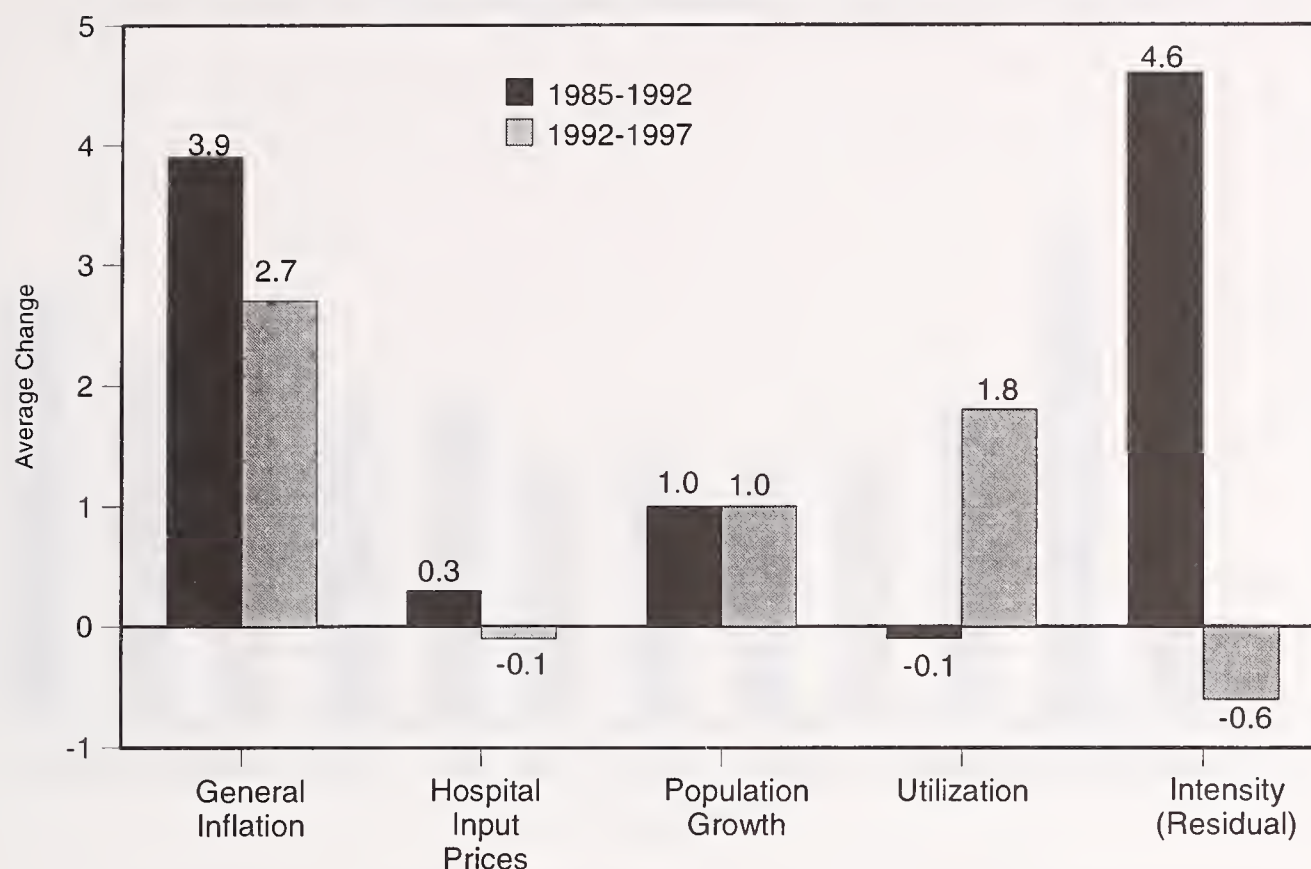
SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The trends in hospital total revenues and expenses tend to move very closely. Through most of the 1980s and into the early 1990s, both revenues and expenses per adjusted admission (a measure of total hospital patient care volume) rose at an annual rate of about 9 percent. In 1993, there was a sharp deceleration in revenues per adjusted admission, and expenses per adjusted admission followed suit.

This deceleration continued in 1994, and in 1997 both revenues and expenses per adjusted admission actually decreased. Early data for 1998 indicate a continuation of unprecedented low rates of growth in both revenues and expenses.



**Chart 3-16. Factors Contributing to the Growth of Total Hospital Expenses, 1985-1997**



NOTE: Hospital expenses grew at an annual rate of 10 percent between 1985 and 1992 and 4.9 percent between 1992 and 1997.

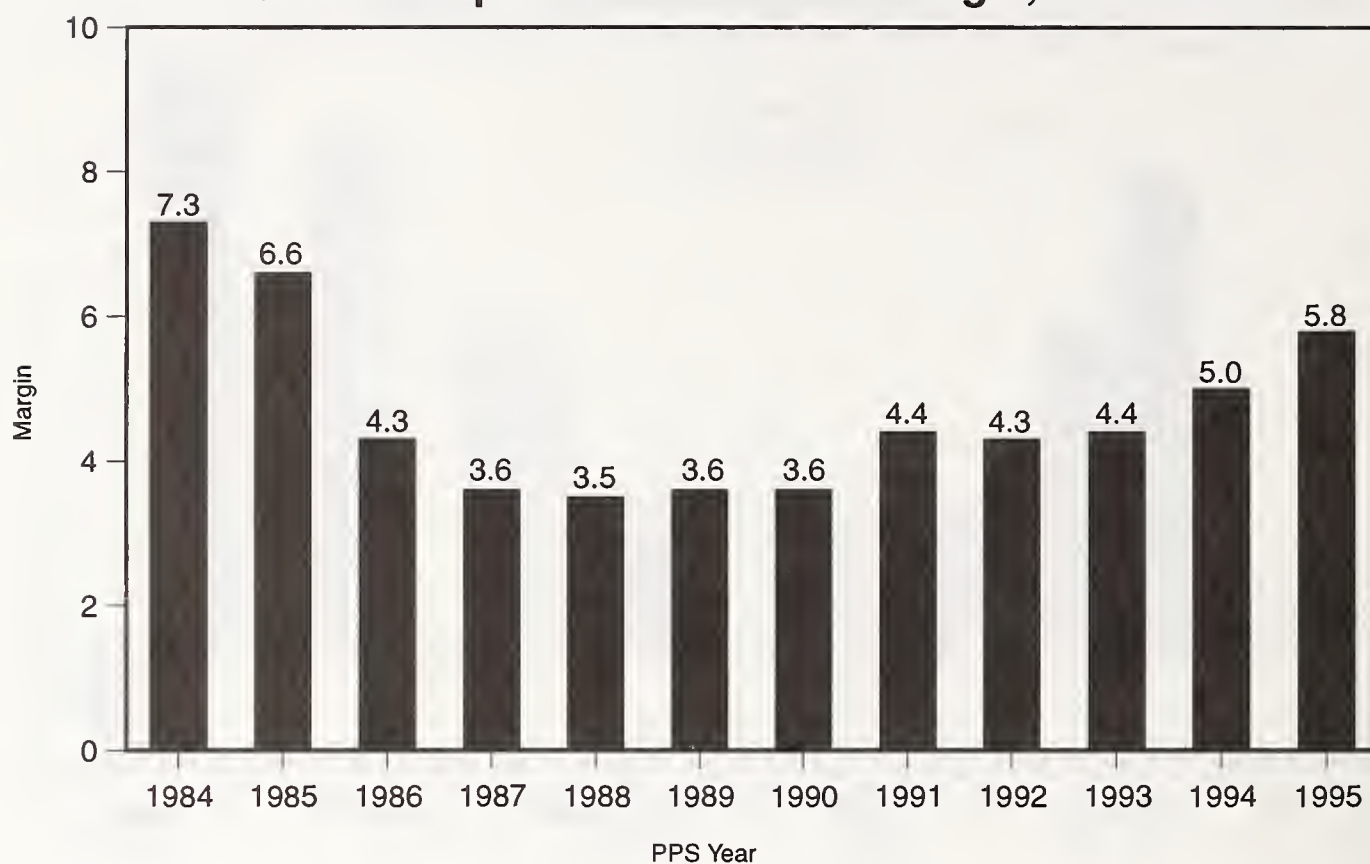
SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The growth of hospital expenses can be attributed to several factors. Beyond the expected contribution of general inflation, hospital input prices may rise at higher or lower rates, depending on the market conditions affecting the categories of labor and other resources hospitals use. Population growth is a fairly constant factor in the demand for hospital services, and the propensity to use those services may vary over time. Finally, intensity refers to the amount of resources devoted by the hospital per adjusted admission.

Comparing these components over the periods from 1985 to 1992 and from 1992 to 1997 provides some insight on the sharp reduction in the growth of hospital expenses between them (from 10.0 percent to 4.9 percent annually). General inflation slowed from 3.9 percent to 2.7 percent, accounting for 1.2 percentage points of the 5.1 percentage point difference in hospital cost growth. Moreover, hospital input prices, which historically had risen faster than general inflation, was below it in the latter period; this accounted for another 0.4 percentage points of the total difference.

Contrary to the other components, the number of adjusted admissions, which had risen at about the same rate as population growth in the earlier period, jumped by 1.9 percentage points. This, however, was more than offset by a decrease in intensity, driven largely by a sharp decline in the average length of inpatient stays.

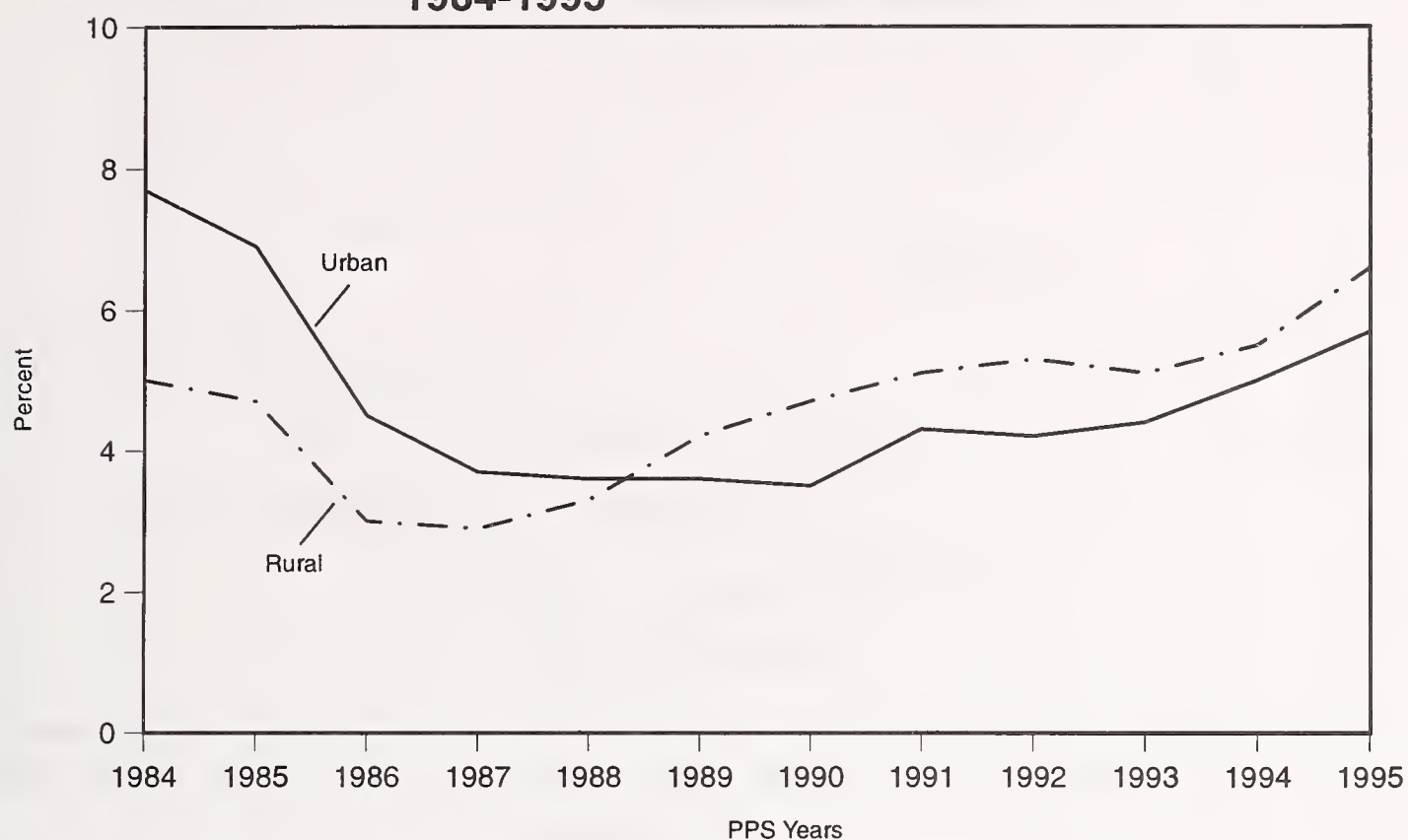
**Chart 3-17. Hospital Total Revenue Margin, 1984-1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The aggregate total margin rose in 1995 to 5.8 percent, compared with 4.4 percent in 1993. This was the highest total margin in ten years, and above the levels indicated by earlier data as far back as the 1970s. More current data show that hospitals have succeeded in controlling the growth in their expenses into early 1998, implying that the total margin still is close to that level.

**Chart 3-18. Hospital Total Revenue Margin, Urban vs. Rural, 1984-1995**

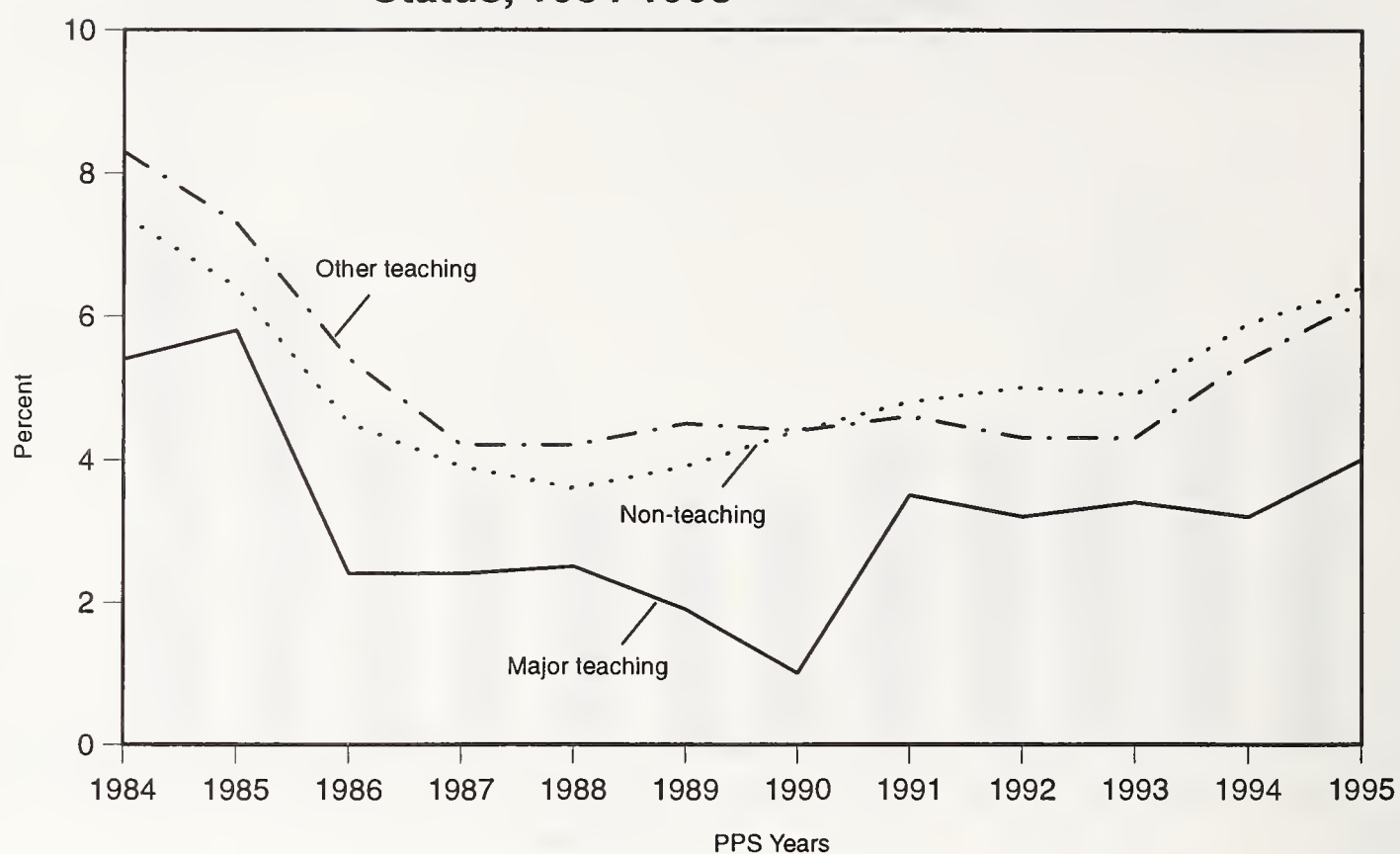


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

As with PPS margins, total margins vary across hospital groups. The patterns, however, may differ sharply. In 1984, the total margin for urban hospitals was 7.7 percent, compared with 5.0 percent for rural hospitals. By 1989, however, the total margin for rural hospitals exceeded that for urban hospitals, 4.2 percent compared with 3.6 percent. Rural hospitals continued to have a higher aggregate total margin than urban hospitals, at least through 1995. Their 1995 margin of 6.6 percent is the highest since data were available. Rural hospitals, however, are more likely to have negative total margins.



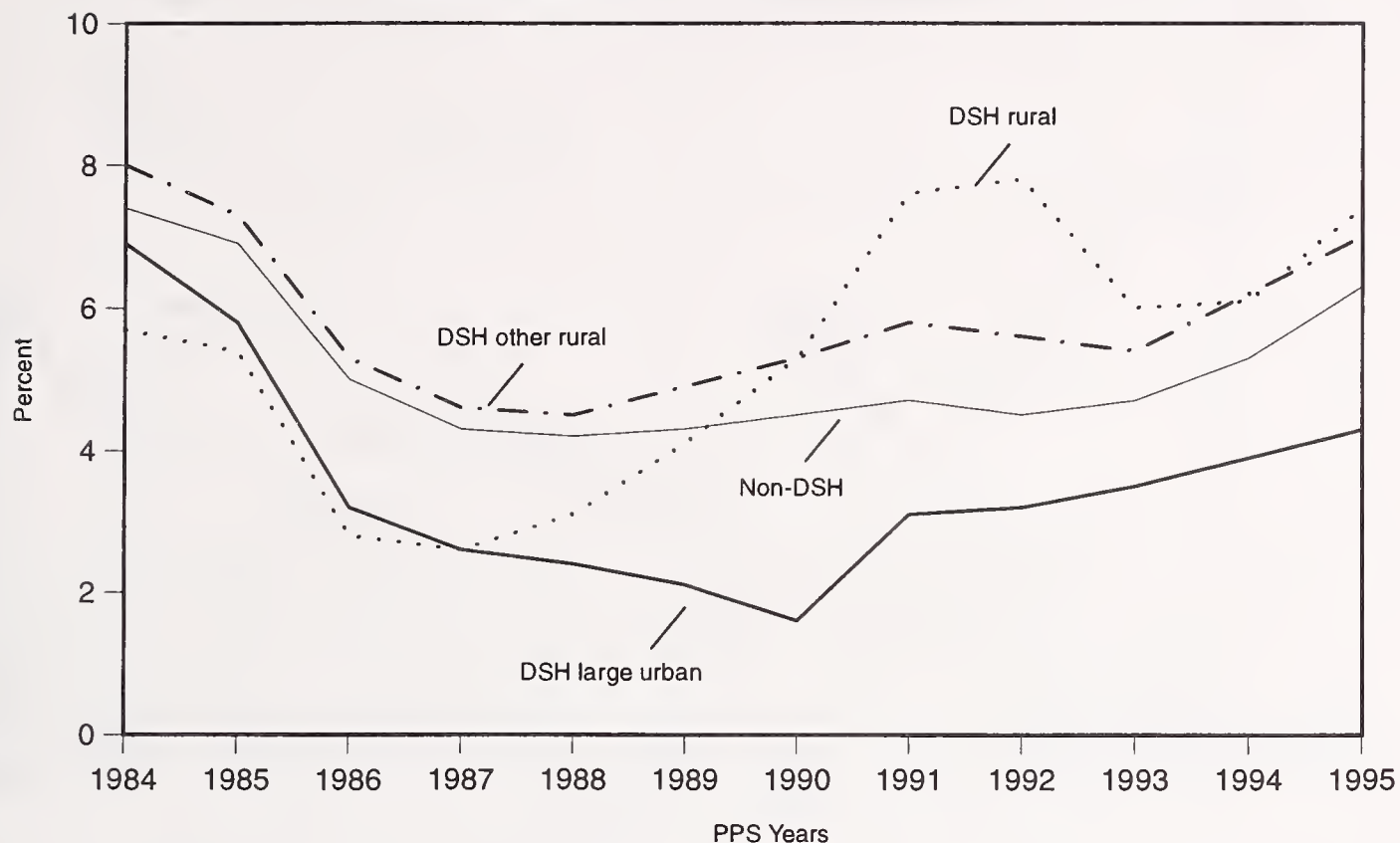
**Chart 3-19. Hospital Total Revenue Margin, by Teaching Status, 1984-1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The pattern of total margins by teaching status is the opposite of the pattern of PPS margins. Major teaching hospitals have always had the lowest total margins of any of these groups. In 1995, the total margin for major teaching hospitals was 4.0 percent, compared with 6.2 percent for other teaching hospitals and 6.4 percent for non-teaching hospitals. This margin was, however, the highest for major teaching hospitals since 1985.

**Chart 3-20. Hospital Total Revenue Margin, by DSH Status, 1984-1995**

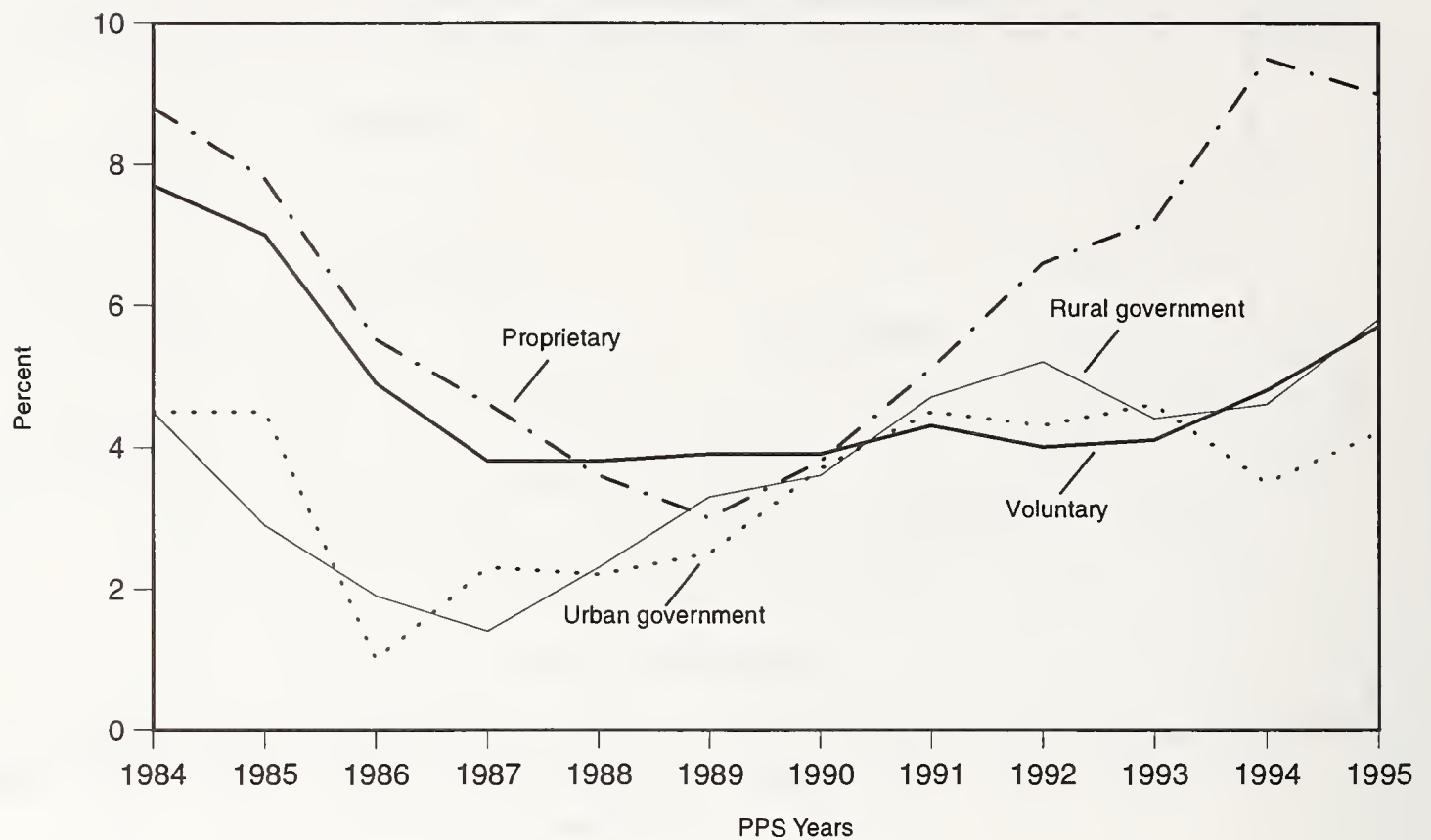


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Like major teaching hospitals, disproportionate share hospitals in large urban areas have a lower total margin than other hospitals. The jump in their total margin in 1991 reflects the influx of Medicaid DSH payments in that year. In 1995, the total margin for this group was 4.3 percent, compared with 6.3 percent for non-disproportionate share hospitals. This also was the highest total margin for this group since 1985.

The trend in the total margin for rural disproportionate share hospitals reflects changes in policy implemented by the Omnibus Budget Reconciliation Acts of 1989 and 1990, as well as cost growth and other market conditions.

**Chart 3-21. Hospital Total Revenue Margin, by Ownership, 1984-1995**



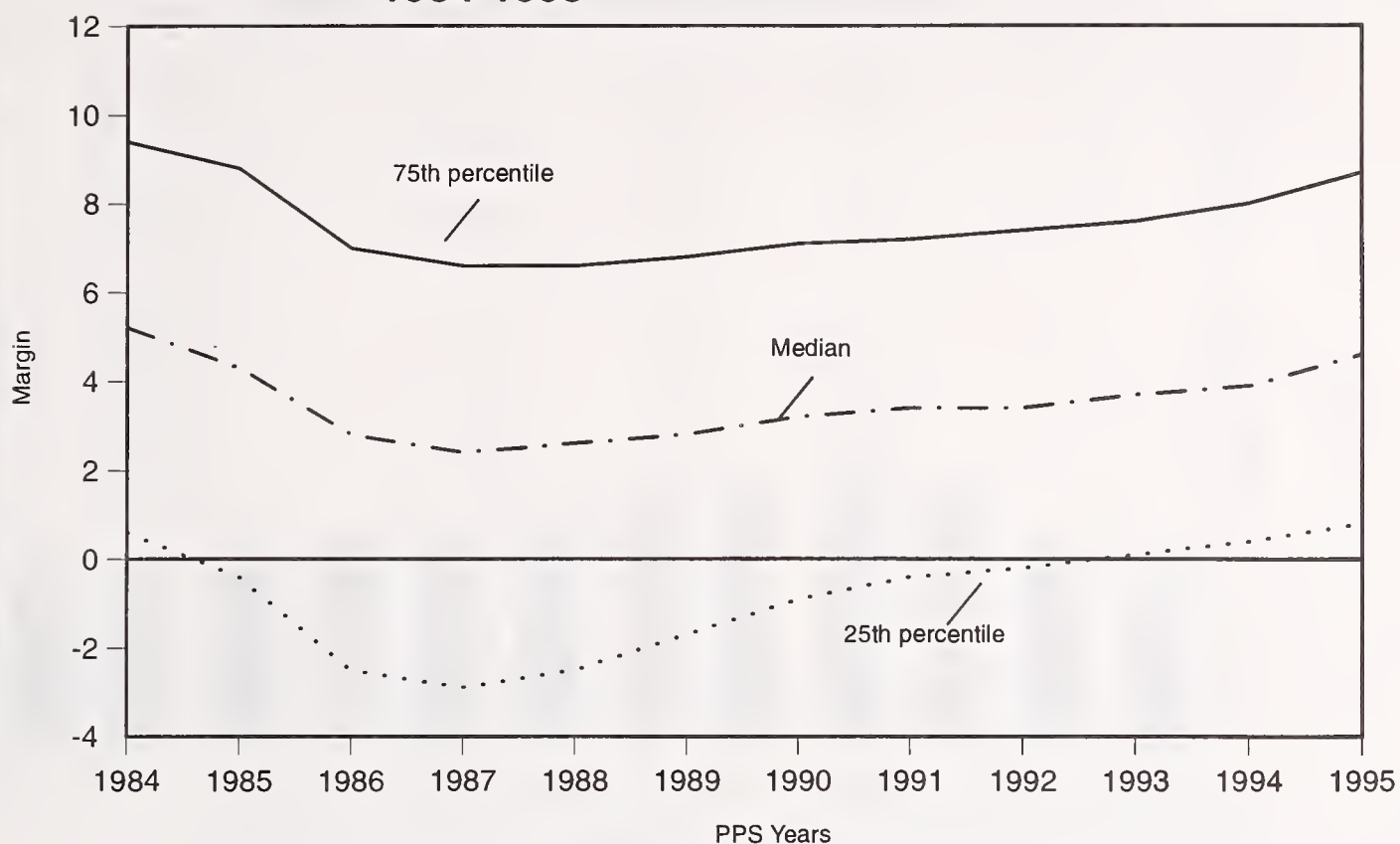
SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Urban government hospitals had the lowest total margin of any ownership category in 1995, 4.2 percent.

The trend in total margins for proprietary hospitals resembles their PPS margin trend. In 1984, this group had the highest total margin of any ownership category--8.8 percent, compared with 7.3 percent for all hospitals. By 1989, this margin had fallen to 3.0 percent, compared with 3.6 percent for all hospitals--a drop 5.8 percentage points in 5 years. By 1994, the total margin for proprietary hospitals had risen again to 9.5 percent, compared with 5.0 percent for all hospitals--a rise of 6.5 percent in 5 years. In 1995, the margin for this group fell slightly, to 9.0 percent. Despite their high aggregate margin, however, proprietary hospitals are more likely than other hospitals to have negative margins.



**Chart 3-22. Distribution of Hospital Total Revenue Margins, 1984-1995**

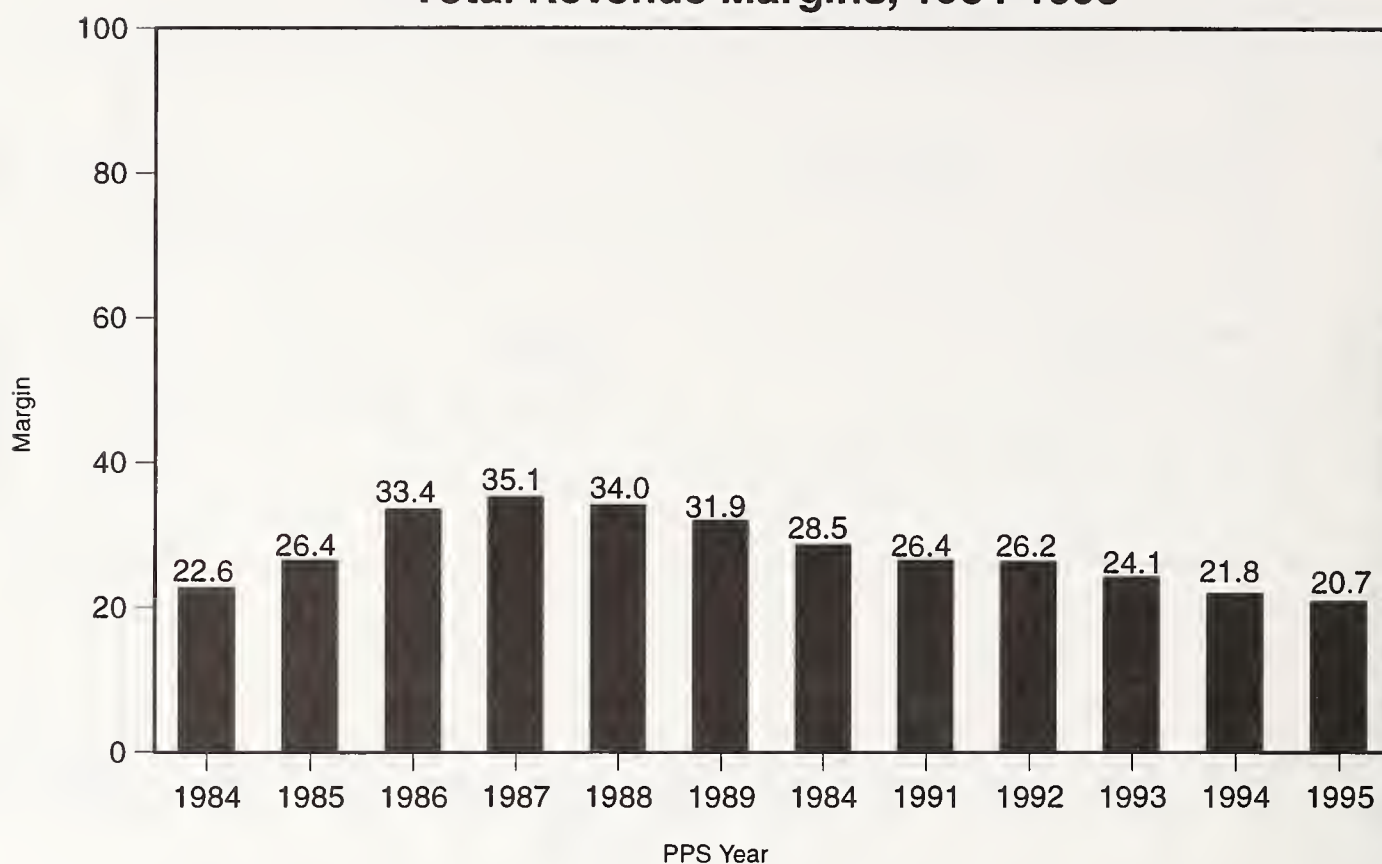


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

In 1984, one-quarter of all hospitals had total margins of at least 9.4 percent, while an equal number had margins below 0.6 percent--a spread of 8.8 percentage points. By 1987, this spread had increased to 9.5 percentage points--a total margin of 6.6 percent at the top quartile and -2.9 percent at the bottom.

More recently, the distribution of total margins has narrowed, with the margin at the top quartile rising to 8.7 percent (up 2.1 percentage points compared with 1987) but the margin at the bottom quartile rising more sharply to 0.8 percent (up 3.7 percentage points since 1987).

**Chart 3-23. Percent of Hospitals With Negative Hospital Total Revenue Margins, 1984-1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

About one in five hospitals had negative total margins in 1995. This, however, was the lowest percentage since PPS began, down from a peak of 35.1 percent in 1987. Urban hospitals are less likely than rural hospitals to have negative total margins, and hospital size appears to be strongly related to overall performance as well, with larger hospitals considerably less likely to have negative total margins.

**Chart 3-24. Aggregate Costs by Payer as a Percent of Total Hospital Costs, by Hospital Group, 1996**

Hospital Group (Sample Size)	Medicare	Medicaid	Government Payers	Other Uncompensated Care	Private Payers
U.S. totals (3,355)	38.9%	13.9%	1.6%	6.1%	36.9%
Urban (1,562)	39.0	13.3	1.6	6.2	37.4
Rural (1,356)	47.3	12.5	1.1	5.2	32.1
Major teaching					
Public (40)	19.1	35.3	8.4	18.9	15.8
Private (110)	34.9	15.4	1.1	6.5	37.8
Other teaching					
Public (34)	28.3	26.0	5.6	13.4	23.3
Private (433)	41.9	10.2	1.1	4.3	40.0
Non-teaching					
Public (714)	44.4	12.5	1.1	6.5	33.7
Private (1,599)	44.7	10.1	0.8	4.5	38.3
Voluntary (2,148)	40.1	12.0	1.0	4.8	39.3
Proprietary (367)	42.6	11.8	0.9	4.6	39.2
Urban government (208)	27.6	26.2	5.7	14.3	23.8
Rural government (576)	47.3	13.7	1.0	5.8	30.5

NOTE: Data reflect inpatient and outpatient services for community hospitals. Most Medicare and Medicaid managed care patients are included in the private payers category.

Totals for all community hospitals are calculated using reported as well as imputed data (35 percent of observations); the imputing process attempts to correct for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Values for hospital groups reflect reported data only. Sample sizes for the hospital groups sum to less than the national total due to missing data needed for group assignment.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

The share of total costs attributable to each of the major payer groups varies by type of hospital. Because the relationship between payments and costs differs greatly among these groups, the mix of patients as represented by these cost shares can have an important impact on overall financial status.

Public major teaching hospitals have the most unfavorable mix of patients, followed closely by public other teaching hospitals. This includes the smallest cost shares for the best paying patient groups (privately insured and Medicare patients) and the largest shares for the groups with the lowest relative payments (uncompensated care, Medicaid, and other government payers—although data imperfections result in most Medicare and Medicaid managed care business being assigned to the private payers category).<sup>1</sup> Relative to other private facilities, private major teaching hospitals have the most unfavorable mix—below-average shares for private payers and Medicare and above-average shares for uncompensated care and Medicaid. Proprietary hospitals have the most advantageous mix of patients, although the differences between proprietary and voluntary hospitals, on average, are modest. Hospitals in rural areas have more Medicare and fewer privately insured patients than those in urban areas.

<sup>1</sup> Other government payers tend to be dominated by local indigent care programs, where payments often cover less than half of associated costs. This category also includes workers' compensation, auto insurance, the Department of Veterans Affairs, and the Civilian Hospital and Medical Program for the Uniformed Services (CHAMPUS).



**Chart 3-25. Aggregate Hospital Payment-to-Cost Ratios, by Hospital Group, 1996**

Hospital Group (Sample Size)	Medicare	Medicaid	Government Payers	Other Uncompensated Care	Private Payers
U.S. totals (3,355)	102.4%	94.8%	83.2%	17.3%	121.5%
Urban (1,562)	100.7	89.9	73.7	16.6	125.2
Rural (1,356)	96.2	88.7	114.2	7.7	139.0
Major teaching					
Public (40)	110.9	104.3	43.0	54.3	168.1
Private (110)	103.9	87.4	88.9	3.8	117.4
Other teaching					
Public (34)	100.5	106.9	20.8	22.1	149.8
Private (433)	99.4	85.8	109.3	1.5	123.0
Non-teaching					
Public (714)	95.5	86.5	117.2	27.7	132.2
Private (1,599)	99.1	84.1	110.8	1.0	129.9
Voluntary (2,148)	98.9	84.4	99.7	2.3	122.7
Proprietary (367)	113.2	96.5	137.2	0.6	140.1
Urban government (208)	102.2	101.8	45.1	45.6	145.7
Rural government (576)	95.1	90.5	109.6	21.0	136.4

NOTE: Payment-to-cost ratios cannot be used to compare payment levels because the mix of services and cost per unit of service vary across payers. They do, however, indicate the relative degree to which payments from each payer cover the costs of treating its patients. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicare and Medicaid managed care patients are included in the private payers category.

Totals for all community hospitals are calculated using reported as well as imputed data (35 percent of observations); the imputing process attempts to correct for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Values for hospital groups reflect reported data only. Sample sizes for the hospital groups sum to less than the national total due to missing data needed for group assignment.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

The highest Medicare payment-to-cost ratios are generally among hospitals that receive large indirect medical education and disproportionate share (DSH) payments, mainly major teaching hospitals. One exception is proprietary hospitals, which have the highest ratio of any group—113.2 percent. Above-average Medicaid payment-to-cost ratios are limited to public hospitals, which benefit heavily from the Medicaid DSH adjustment. The wide variation in relative payments for other government payers reflects the mix of payers within this category. Where the category is dominated by local indigent care programs—generally the case for public hospitals—the average payment levels are low. Conversely, public hospitals are the primary beneficiary of operating subsidies from state and local governments, which are considered uncompensated care payments in this analysis. Finally, public major teaching and public other teaching hospitals receive the highest payments relative to costs from private insurers, reflecting their ability to make up for a small quantity of these patients with higher payments from these payers. Among non-public institutions, the highest private payer payments relative to costs are received by proprietary hospitals.

**Chart 3-26. Aggregate Gains or Losses as a Percent of Total Hospital Costs, by Hospital Group and Payer, 1996**

Hospital Group (Sample Size)	Total Gains	Medicare	Medicaid	Other Government Payers and Subsidies	Uncompensated Care	Private Payers	Non- Patient Care
U.S. totals (3,355)	7.2%	0.9%	-0.7%	-0.1%	-5.1%	7.9%	4.3%
Urban (1,562)	7.3	0.3	-1.3	-0.3	-5.1	9.4	4.4
Rural (1,356)	8.3	-1.8	-1.4	0.4	-4.8	12.5	3.4
Major teaching							
Public (40)	5.0	2.1	1.5	-4.1	-8.6	10.7	3.4
Private (110)	5.4	1.4	-1.9	-0.1	-6.3	6.6	5.7
Other teaching							
Public (34)	5.5	0.1	1.8	-3.6	-10.4	11.6	6.0
Private (433)	7.8	-0.3	-1.5	0.1	-4.2	9.2	4.4
Non-teaching							
Public (714)	7.0	-2.0	-1.7	1.1	-4.7	10.8	3.5
Private (1,599)	8.8	-0.4	-1.6	0.1	-4.4	11.5	3.6
Voluntary (2,148)	6.7	-0.4	-1.9	0.0	-4.6	8.9	4.7
Proprietary (367)	18.3	5.6	-0.4	0.3	-4.6	15.7	1.6
Urban government (208)	5.7	0.6	0.5	-2.4	-7.8	10.9	3.9
Rural government (576)	7.1	-2.3	-1.3	0.9	-4.5	11.1	3.2

NOTE: Gains or losses are the difference between the cost of providing care (or operating a non-patient care service) and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care up to the level of each hospital's uncompensated care costs. Gains and losses from the sources shown sum to total gains. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicare and Medicaid managed care patients are included in the private payers category.

Totals for all community hospitals are calculated using reported as well as imputed data (35 percent of observations); the imputing process attempts to correct for under representation of proprietary and public hospitals relative to voluntary institutions. Values for hospital groups reflect reported data only. Sample sizes for the hospital groups sum to less than the national total due to missing data needed for group assignment.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

A payer's gains or losses as a percent of total costs are the product of its payment-to-cost ratio (see Chart 3-25) and its patient cost share (see Chart 3-24). Proprietary hospitals have by far the highest net gains summed across all payers—18.3 percent—with Medicare and private payers contributing almost all of this amount. As noted in the previous tables, these hospitals benefit from both the largest shares of Medicare and privately insured patients and the highest payments relative to costs from these payers. Major teaching hospitals--both public and private—have the smallest overall net gains—5.0 percent and 5.4 percent, respectively. The public major teaching group must absorb such large losses from uncompensated care and local indigent care programs that even the special treatment they receive from Medicare and Medicaid (teaching and DSH payments) is not enough to offset them. Private major teaching hospitals have somewhat smaller losses from providing indigent care, but also benefit less from special Medicare treatment (primarily less DSH payments) and generally are not targeted for any special assistance by Medicaid programs.



**Chart 3-27. Percentage Point Change in Aggregate Gains or Losses as a Percent of Total Costs, by Hospital Group and Payer, 1986-1996**

Hospital Group (Sample Size)	Medicare		Medicaid		Uncompensated Care		Private Payers	
	1986-92	1992-96	1986-92	1992-96	1986-92	1992-96	1986-92	1992-96
Urban (1,562)	-5.1	4.5	-0.3	-0.3	0.1	-0.2	3.6	-2.7
Rural (1,356)	-3.7	2.6	0.6	-0.5	0.3	0.2	4.2	-1.0
Major teaching								
Public (40)	-1.6	4.0	3.0	-3.2	-0.3	-2.0	1.0	3.3
Private (110)	-4.4	3.9	0.0	-0.9	0.4	-0.6	2.0	-2.4
Other teaching								
Public (34)	-5.5	3.6	-1.8	2.5	0.4	0.1	7.3	-1.8
Private (433)	-5.8	4.7	-0.5	-0.1	0.2	0.0	4.4	-3.4
Non-teaching								
Public (714)	-4.1	3.5	0.2	-0.7	0.7	0.3	4.4	-1.9
Private (1,599)	-5.3	4.2	0.4	0.1	0.0	0.1	4.1	-2.7
Voluntary (2,148)	-5.0	3.9	-0.3	-0.2	0.1	0.0	3.6	-3.0
Proprietary (367)	-5.8	10.1	-0.6	1.8	0.9	-0.1	3.7	0.0
Urban government (208)	-3.2	4.0	2.0	-1.5	0.3	-1.0	3.0	0.5
Rural government (576)	-3.1	2.8	0.8	-0.9	0.4	0.5	4.7	-0.8

NOTE: Gains or losses are the difference between the cost of providing care (or operating a non-patient care service) and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Subsidies in excess of uncompensated care costs are combined with revenue from other government payers. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicare and Medicaid managed care patients are included in the private payers category.

Data were derived from three hospital samples: all hospitals with the required data elements for 1986 and 1989, and the same for 1989 and 1992 and then 1992 and 1996. Values reflect reported data only.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

The profile of gains and losses by hospital group has changed over time. From 1986 through 1992, Medicare and Medicaid losses generally increased, but most hospitals avoided the resulting financial stress by raising their prices for privately insured patients. Public major teaching hospitals almost completely avoided the increased losses from government-sponsored patients, however, primarily through the Medicare and Medicaid DSH adjustments that were implemented during this period. This group had a correspondingly lower increase in their gains from private payers. Proprietary hospitals saw their financial position deteriorate the most during this period.

From 1992 to 1996, private payers generally put increased financial pressure on hospitals through aggressive contracting and the resulting reduced cost growth produced higher Medicare payment-to-cost ratios. Proprietary hospitals fared markedly better than their voluntary and public counterparts, however. They improved their Medicare performance more than twice as much as any other group (10 percentage points compared to about 4 points for all others). They similarly improved their Medicaid performance the most and held their private payer gains constant while all other groups lost ground. All of these relative improvements appear to be linked to greater success in controlling per unit costs (see Chart 3-7).



**Chart 3-28. Aggregate Gains or Losses as a Percentage of Total Hospital Costs, by Low-Income Patient Cost Share and Payer, 1996**

Low-Income Patient Cost Share Group (Sample Size)	Total Gains	Medicare	Medicaid	Other Government Payers and Subsidies	Uncompensated Care	Private Payers	Non- Patient Care
U.S. total (3,355)	7.2%	0.9%	-0.7%	-0.1%	-5.1%	7.9%	4.3%
Urban							
4th quartile (344)	4.9	2.4	-0.7	-1.5	-9.1	9.4	4.3
3rd quartile (383)	7.6	0.4	-2.1	0.2	-5.2	9.9	4.4
2nd quartile (396)	7.9	-0.7	-1.7	0.1	-4.0	9.9	4.3
1st quartile (439)	8.7	-0.8	-0.9	0.0	-2.6	8.5	4.5
Rural							
4th quartile (410)	7.4	0.2	-1.3	0.5	-6.9	11.5	3.3
3rd quartile (372)	8.6	-1.5	-1.4	0.4	-5.0	12.9	3.1
2nd quartile (394)	9.2	-2.6	-1.6	0.3	-3.7	13.4	3.6
1st quartile (230)	7.6	-4.7	-1.2	0.6	-2.2	11.5	3.7

NOTE: Gains or losses are the difference between the cost of providing care (or operating a non-patient care service) and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Subsidies in excess of uncompensated care costs are combined with revenue from other government payers. Gains and losses from the sources shown sum to total gains. Data are for community hospitals and reflect both inpatient and outpatient services. Most Medicare and Medicaid managed care patients are included in the private payers category.

Low-income patient costs include the cost of treating Medicare patients eligible for Supplemental Security Income, patients sponsored by Medicaid or other indigent care program, and uncompensated care patients. The first quartile groups include the urban or rural hospitals among the 25 percent of all hospitals with the smallest low-income shares; the fourth quartile groups include those among the 25 percent with the largest shares.

Totals for all U.S. hospitals are calculated using reported as well as imputed data (35 percent of observations); the imputing process attempts to correct for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Values for low-income share groups reflect reported data only. Sample sizes for the low-income share groups sum to less than the national total due to missing data needed for group assignment.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Hospital Association Annual Survey of Hospitals.

Dividing all community hospitals into four groups according to the proportion of their costs devoted to treating poor patients provides evidence that there is a strong correlation between low-income share and financial performance. Particularly in urban areas, total gains from all revenue sources decline as a percent of total costs as low-income share rises. Losses from uncompensated care and other government payers (mostly local indigent care programs) are more than twice as high for urban hospitals in the fourth quartile of low-income shares as those in the third quartile. Some of this difference, however, is offset by higher Medicare and Medicaid payments, mostly in the form of teaching and DSH payments.

**Chart B-1. Annual Changes in Medicare Hospital Inpatient PPS Operating Payments and Costs Per Case, Hospital Market Basket Index, and Payment Rates, 1984-1995**

PPS Year	PPS Operating Payments Per Case	PPS Operating Costs Per Case	PPS Hospital Market Basket	PPS Operating Payment Rates	Consumer Price Index
1984	18.5%	1.8%	4.9%	4.7%	4.1%
1985	10.5	11.0	3.9	4.5	3.7
1986	3.2	9.6	3.9	0.5	2.5
1987	5.4	9.1	3.5	1.2	2.9
1988	6.0	9.0	4.7	1.5	4.1
1989	6.6	9.2	5.5	3.3	4.7
1990	6.5	8.9	4.6	4.7	5.0
1991	6.0	7.0	4.3	3.4	5.1
1992	5.3	4.7	3.1	3.0	3.0
1993	3.7	1.2	3.0	2.7	3.1
1994	3.8	-1.3	2.4	2.0	2.6
1995	4.1	-1.0	3.0	2.0	2.8

NOTE: Data on payments and costs for each PPS year are from each hospital's cost reporting period beginning during the corresponding federal fiscal year. Data on the hospital market basket index, payment rates, and the consumer price index are for the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with 1986 and New Jersey beginning with 1989. Changes in payments and costs are based on cohorts of hospitals with Medicare Cost Reports available in each two consecutive years.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

**Chart B-2. Annual Change in Medicare Hospital Inpatient PPS Operating Costs Per Case, by Hospital Group, 1984-1995**

Hospital Group	PPS Year											
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
All hospitals	1.8%	11.0%	9.6%	9.1%	9.0%	9.2%	8.9%	7.0%	4.7%	1.2%	-1.3%	-1.0%
Urban	1.6	10.9	9.3	9.0	9.1	9.5	8.4	6.6	4.5	1.1	-1.7	-1.1
Rural	1.5	10.0	9.7	8.5	8.7	8.0	10.5	8.9	5.8	2.2	0.8	-0.2
Large urban	0.6	10.9	9.3	8.5	9.4	9.3	7.9	5.9	3.5	1.5	-2.3	-1.1
Other urban	3.2	10.9	9.5	10.1	8.7	9.9	9.3	7.7	6.1	0.6	-0.6	-1.0
Rural referral	1.3	10.8	9.7	9.6	9.5	9.7	9.8	9.0	5.1	2.3	-0.1	0.3
Sole community	1.3	10.1	8.4	7.3	9.0	7.3	9.6	8.9	5.2	2.1	1.2	1.0
Other rural	1.5	9.3	9.8	7.7	7.7	7.0	11.0	8.7	6.6	2.0	1.2	-1.2
Major teaching	0.7	10.3	8.2	8.2	9.3	10.8	8.3	6.5	3.7	2.2	-2.7	-1.0
Other teaching	1.7	10.9	9.1	9.7	8.3	8.9	9.1	6.8	4.7	0.9	-1.3	0.1
Non-teaching	1.9	10.9	9.9	8.9	9.6	8.9	8.7	7.2	4.8	0.9	-0.8	-2.0
DSH:												
Large urban	-0.1	10.9	9.6	7.9	9.3	9.7	7.8	6.0	3.2	1.2	-2.3	-1.1
Other urban	3.5	10.2	9.5	10.3	9.0	9.8	9.5	8.1	6.5	0.8	-0.3	-1.2
Rural	0.5	9.9	10.9	8.8	9.4	8.9	10.1	10.1	7.3	3.1	-0.6	-1.1
Non-DSH	2.3	11.4	9.5	9.5	9.0	8.9	9.2	7.0	4.8	1.3	-1.1	-0.8
Teaching and DSH	0.9	10.6	9.1	8.8	8.6	9.7	8.7	7.0	4.3	1.2	-1.7	-0.6
Teaching only	2.7	11.5	8.4	9.9	8.5	9.2	9.2	6.4	4.8	2.0	-1.9	0.4
DSH only	1.6	10.4	10.1	8.7	10.1	9.2	8.3	7.2	5.0	0.8	-1.1	-2.5
Non-teaching and Non-DSH	2.0	11.2	9.7	9.1	9.1	8.7	9.0	7.2	4.8	1.0	-0.7	-1.6
Rural:												
<50 beds	1.1	10.5	9.2	7.9	8.7	4.0	12.3	8.1	4.9	2.6	2.4	-1.1
50-99 beds	1.1	9.2	9.1	6.8	7.1	7.5	10.2	8.7	5.8	2.0	1.7	-0.2
100-149 beds	1.7	8.9	9.8	8.1	8.0	9.2	9.5	8.6	6.5	2.9	-1.2	-0.7
150-199 beds	2.6	10.5	10.4	8.7	10.7	9.5	8.9	8.4	6.9	1.4	0.6	1.0
200+ beds	0.4	10.7	9.1	11.3	9.5	10.6	9.8	10.3	4.7	1.8	0.1	0.7
Urban:												
<100 beds	0.2	12.0	10.1	8.8	8.8	8.0	6.9	6.2	2.9	0.7	0.1	-2.2
100-199 beds	0.2	10.2	9.4	8.5	8.8	8.9	7.7	5.3	4.7	0.4	-1.9	-1.7
200-299 beds	2.0	10.8	8.9	8.5	8.8	8.8	8.2	5.9	5.1	0.9	-1.3	-1.3
300-399 beds	2.1	10.2	9.5	8.9	8.9	9.2	8.6	6.7	3.9	0.7	-1.7	-1.5
400-499 beds	2.3	10.5	8.7	9.8	9.1	10.2	8.3	8.2	4.5	0.4	-2.1	-0.7
500+ beds	2.2	12.0	8.5	10.3	9.7	11.2	9.7	7.5	3.5	2.4	-2.4	-1.0
New England	1.2	14.1	8.7	9.8	14.2	10.7	6.1	2.6	4.5	2.4	0.7	-0.1
Middle Atlantic	-1.0	8.1	11.3	11.9	10.1	11.2	9.0	6.5	4.7	2.6	-1.2	0.3
South Atlantic	3.4	12.1	11.1	10.0	10.8	10.9	9.5	7.1	4.4	1.3	-1.8	-1.8
East North Central	0.2	10.2	8.2	7.1	6.7	7.5	8.5	7.5	5.1	0.9	-0.7	-0.2
East South Central	4.2	9.2	8.3	11.3	8.8	9.1	11.3	10.2	7.6	-0.2	-3.2	-1.3
West North Central	2.6	11.7	8.6	9.5	8.5	6.8	11.2	6.1	5.0	1.2	0.0	0.2
West South Central	2.3	13.2	11.2	9.3	10.6	9.1	10.4	8.5	4.3	2.2	-1.5	-4.5
Mountain	3.4	7.2	8.1	9.1	7.4	9.0	8.6	6.6	6.1	0.4	-0.3	-1.0
Pacific	1.0	11.1	9.6	7.0	7.9	8.9	5.8	6.6	2.9	-0.5	-1.8	-0.9
Voluntary	1.8	10.7	9.1	9.0	9.1	9.1	8.8	6.9	4.7	1.5	-1.3	-0.7
Proprietary	0.7	10.7	10.6	9.5	9.2	10.8	9.0	5.6	3.7	-1.0	-3.5	-3.5
Urban government	2.5	11.8	10.2	8.8	8.9	10.1	7.9	7.9	5.7	0.3	-1.1	-1.8
Rural government	1.5	11.8	10.1	8.2	7.8	6.8	10.8	9.8	5.7	3.0	2.1	-0.2

NOTE: Data for each PPS year are from hospitals' Medicare cost reporting periods beginning during the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning in 1986 and New Jersey beginning in 1989. Changes are based on cohorts of hospitals with Medicare Cost Reports in each two consecutive years. DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.



**Chart B-3. Medicare Hospital Inpatient PPS Margin, by Hospital Group, 1984-1995**

Hospital Group	PPS Year											
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
All hospitals	13.4%	13.0%	8.7%	5.9%	2.7%	0.3%	-1.5%	-2.4%	-0.9%	1.1%	5.5%	10.5%
Urban	14.5	13.9	9.8	6.8	3.3	0.8	-1.2	-2.2	-0.9	1.3	6.3	11.3
Rural	7.7	7.3	2.2	0.2	-1.3	-2.9	-3.7	-3.7	-1.4	-0.7	0.4	5.2
Large urban	14.9	13.9	10.0	6.8	3.0	0.6	-0.8	-1.5	0.4	2.8	8.5	13.4
Other urban	13.8	14.1	9.4	6.8	3.9	1.1	-1.8	-3.4	-2.9	-1.0	2.7	7.9
Rural referral	8.8	11.5	6.7	4.0	1.9	-1.2	-3.5	-3.8	-0.8	-1.6	-0.2	4.3
Sole community	8.1	5.7	1.8	0.2	-1.6	-2.8	-1.3	-1.0	2.1	3.9	5.0	7.8
Other rural	6.9	5.1	-1.0	-2.8	-3.7	-4.3	-5.1	-4.8	-3.7	-2.3	-1.5	4.7
Major teaching	18.6	19.7	15.2	12.9	9.9	7.6	7.0	7.4	9.2	10.8	16.9	21.0
Other teaching	14.7	14.3	10.3	6.9	3.7	1.2	-1.2	-2.6	-1.5	0.6	5.0	9.5
Non-teaching	11.2	10.1	5.2	2.5	-0.7	-3.2	-5.2	-6.4	-5.0	-3.1	0.6	6.4
DSH:												
Large urban	15.5	14.4	10.7	8.4	5.2	3.3	2.7	2.7	4.8	7.5	13.6	18.1
Other urban	13.5	14.4	10.1	7.8	5.2	2.6	0.1	-1.4	-1.0	0.9	4.5	10.1
Rural	8.4	8.1	2.1	-0.1	-0.7	-2.4	-2.0	-1.4	0.4	0.6	1.8	7.7
Non-DSH	12.4	11.7	7.0	3.4	-0.2	-2.9	-5.6	-6.8	-5.6	-4.0	-0.4	4.7
Teaching and DSH	15.9	16.0	12.3	10.0	7.4	5.2	4.0	3.5	4.9	7.2	12.4	16.7
Teaching only	15.7	16.0	11.3	6.6	2.4	-0.3	-3.4	-4.2	-2.9	-1.6	2.5	7.3
DSH only	11.9	10.9	6.2	3.8	0.7	-1.6	-2.9	-3.7	-2.2	0.0	4.2	10.4
Non-teaching and Non-DSH	10.6	9.4	4.5	1.6	-1.8	-4.5	-6.9	-8.4	-7.2	-5.5	-2.3	3.0
Rural:												
<50 beds	6.0	4.3	-1.7	-2.3	-2.1	-2.0	-1.8	-2.6	-0.3	1.0	0.5	6.1
50-99 beds	8.4	6.3	1.1	-0.4	-1.8	-2.6	-3.2	-2.4	-0.6	0.9	1.7	6.4
100-149 beds	7.3	7.1	2.1	0.0	-1.9	-4.3	-4.8	-3.8	-2.0	-2.3	0.6	5.7
150-199 beds	7.5	9.5	4.8	2.7	1.4	-1.4	-3.1	-2.6	-2.1	-0.8	-0.7	3.0
200+ beds	9.7	12.4	7.0	2.7	-0.6	-3.7	-5.7	-7.2	-2.6	-3.0	-1.2	3.7
Urban:												
Under 100 beds	11.5	10.4	5.1	1.8	-1.0	-3.4	-6.1	-8.1	-7.1	-4.0	-0.9	4.2
100-199 beds	13.0	11.4	7.1	4.1	0.9	-2.0	-4.2	-5.2	-4.6	-1.6	3.3	8.7
200-299 beds	13.9	13.0	8.9	5.6	2.1	-0.4	-2.4	-3.6	-2.4	-0.2	4.1	9.2
300-399 beds	14.8	14.4	10.3	7.2	3.9	1.2	-0.9	-2.1	-0.4	1.7	6.8	11.7
400-499 beds	15.4	16.4	12.5	10.2	6.9	4.0	2.7	1.6	2.2	4.4	9.5	14.3
500+ beds	18.2	18.2	13.8	10.8	6.6	4.4	2.2	1.7	4.0	5.0	10.5	15.1
New England	12.3	11.6	8.9	5.7	-1.5	-7.9	-5.6	-2.1	-0.1	1.4	5.2	9.4
Middle Atlantic	15.4	15.1	12.9	11.4	9.5	4.5	1.7	1.2	2.2	3.7	8.7	12.2
South Atlantic	12.3	11.4	5.5	2.4	-2.0	-5.3	-6.9	-5.9	-4.3	-2.5	2.6	8.8
East North Central	13.3	13.9	9.0	5.1	1.1	-0.5	-2.5	-5.0	-3.3	-1.2	2.2	6.9
East South Central	9.5	10.1	6.2	3.3	1.4	0.5	-1.4	-3.5	-4.5	-1.9	4.0	10.5
West North Central	15.5	14.6	9.7	6.1	3.2	1.7	-1.2	-3.0	-2.7	-1.3	2.5	6.2
West South Central	14.6	13.1	8.1	4.9	1.1	-0.2	-2.8	-4.7	-2.6	-1.2	3.3	10.8
Mountain	12.3	13.8	10.0	6.5	4.3	2.7	2.3	1.7	3.1	5.7	8.4	12.9
Pacific	14.3	12.7	8.1	6.2	5.1	4.0	3.2	1.5	4.3	8.0	13.3	18.0
Voluntary	13.9	13.6	9.6	6.5	3.2	0.8	-1.3	-2.4	-1.1	0.7	4.9	9.6
Proprietary	13.1	11.2	6.3	3.4	-0.2	-3.9	-5.8	-4.6	-2.3	1.6	8.8	15.8
Urban government	13.5	14.1	9.0	7.4	4.7	3.5	2.6	1.4	2.4	5.0	9.7	14.6
Rural government	6.6	5.0	-0.7	-2.4	-2.2	-3.6	-4.0	-4.4	-2.6	-2.0	-2.7	2.4

NOTE: Data for each PPS year are from hospitals' Medicare cost reporting periods beginning during the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning in 1986 and New Jersey beginning in 1989. DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

**Chart B-4. Distribution of Medicare Hospital Inpatient PPS Margins, 1984-1995**

PPS Year	25th Percentile	Median	75th Percentile	Percent of Hospitals with Negative Margin
1984	3.1%	10.3%	16.2%	18.2%
1985	1.3	9.2	16.0	21.8
1986	-4.2	4.5	11.8	35.6
1987	-6.8	2.6	10.4	42.2
1988	-9.7	0.6	9.4	48.3
1989	-11.9	-1.7	7.9	54.7
1990	-13.6	-3.3	6.6	59.0
1991	-15.4	-4.4	5.9	61.2
1992	-14.3	-2.7	7.7	57.0
1993	-12.1	-0.7	9.5	51.7
1994	-9.8	1.8	12.3	45.3
1995	-4.1	6.7	17.3	33.2

NOTE: Data for each PPS year are from hospitals' Medicare cost reporting periods beginning during the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning in 1986 and New Jersey beginning in 1989.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

**Chart B-5. Distribution of Medicare Hospital Inpatient PPS Margins, by Hospital Group, 1995**

Hospital Group	25th Percentile	Median	75th Percentile	Percent of Hospitals with Negative Margin
All hospitals	-4.1%	6.7%	17.3%	33.2%
Urban	-2.5	8.0	17.9	29.9
Rural	-6.5	5.0	16.3	37.3
Large urban	-0.7	9.9	20.2	26.0
Other urban	-4.0	5.8	15.3	34.9
Rural referral	-3.6	2.7	11.8	40.2
Sole community	-2.5	8.1	20.5	29.5
Other rural	-8.5	4.1	15.5	40.5
Major teaching	12.8	21.2	29.1	7.5
Other teaching	-0.4	8.6	17.3	26.1
Non-teaching	-5.8	5.3	15.9	36.4
DSH:				
Large urban	5.7	15.8	26.4	14.5
Other urban	-0.7	8.5	17.5	26.6
Rural	-2.0	10.4	22.4	29.5
Non-DSH	-7.4	3.8	13.8	39.9
Teaching and DSH	5.8	15.3	24.8	13.7
Teaching only	-4.5	5.3	14.9	36.2
DSH only	-1.5	9.8	20.6	27.1
Non-teaching and Non-DSH	-7.8	3.6	13.8	40.4
Rural:				
<50 beds	-8.5	5.7	18.7	37.7
50-99 beds	-5.6	4.8	15.5	35.5
100-149 beds	-4.9	5.8	14.3	35.8
150-199 beds	-6.0	1.6	8.6	41.1
200+ beds	-2.8	3.0	9.0	45.8
Urban:				
<100 beds	-9.4	4.1	14.6	40.9
100-199 beds	-2.1	8.3	18.5	29.1
200-299 beds	-2.0	7.3	17.2	30.2
300-399 beds	0.8	9.8	19.3	23.4
400-499 beds	4.3	12.9	22.1	17.2
500+ beds	8.1	15.2	21.6	10.3
New England	-15.0	0.7	13.8	49.3
Middle Atlantic	-2.2	6.9	16.7	29.9
South Atlantic	-4.1	6.0	16.0	33.1
East North Central	-8.3	1.7	10.8	45.3
East South Central	2.0	11.6	20.7	20.8
West North Central	-7.1	3.5	12.6	40.5
West South Central	-3.0	9.2	19.7	30.3
Mountain	-0.8	10.1	22.0	26.1
Pacific	1.8	14.3	26.2	21.6
Voluntary	-4.2	6.0	15.5	34.3
Proprietary	4.2	15.3	25.3	18.5
Urban government	-3.7	9.0	20.0	32.4
Rural government	-8.3	3.8	15.2	40.0

NOTE: Data for each PPS year are from hospitals' Medicare cost reporting periods beginning during the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning in 1986 and New Jersey beginning in 1989. DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.



**Chart B-6. Hospital Total Revenue Margin, by Hospital Group, 1984-1995**

Hospital Group	PPS Year											
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
All hospitals	7.3%	6.6%	4.3%	3.6%	3.5%	3.6%	3.6%	4.4%	4.3%	4.4%	5.0%	5.8%
Urban	7.7	6.9	4.5	3.7	3.6	3.6	3.5	4.3	4.2	4.4	5.0	5.7
Rural	5.0	4.7	3.0	2.9	3.3	4.2	4.7	5.1	5.3	5.1	5.5	6.6
Large urban	7.5	6.6	4.1	3.2	3.0	2.9	2.5	3.7	3.7	3.9	4.4	5.0
Other urban	8.1	7.3	5.4	4.6	4.5	4.7	5.2	5.5	5.2	5.2	6.0	6.9
Rural referral	6.9	7.1	5.5	4.9	5.4	6.0	6.1	6.4	6.6	6.0	6.7	8.2
Sole community	4.6	3.9	2.2	2.4	2.5	3.2	4.1	5.1	5.2	5.3	5.6	5.9
Other rural	4.0	3.3	1.6	1.5	2.1	3.1	3.9	4.0	4.2	4.2	4.5	5.5
Major teaching	5.4	5.8	2.4	2.4	2.5	1.9	1.0	3.5	3.2	3.4	3.2	4.0
Other teaching	8.3	7.3	5.4	4.2	4.2	4.5	4.4	4.6	4.3	4.6	5.4	6.2
Non-teaching	7.4	6.4	4.5	3.9	3.6	3.9	4.4	4.8	5.0	4.9	5.9	6.4
DSH:												
Large urban	6.9	5.8	3.2	2.5	2.4	2.1	1.6	3.1	3.2	3.5	3.9	4.3
Other urban	8.0	7.3	5.3	4.6	4.5	4.9	5.3	5.8	5.6	5.4	6.2	7.0
Rural	5.7	5.4	2.8	2.6	3.1	4.1	5.3	7.6	7.8	6.0	6.1	7.4
Non-DSH	7.4	6.9	5.0	4.3	4.2	4.3	4.5	4.7	4.5	4.7	5.3	6.3
Teaching and DSH	6.8	6.1	3.5	2.9	2.9	3.0	2.4	3.9	3.7	3.8	4.2	4.8
Teaching only	8.7	8.5	6.1	5.1	5.1	4.6	4.6	5.0	4.1	4.8	5.1	6.6
DSH only	8.1	6.7	4.7	3.8	3.5	3.5	4.3	5.2	5.4	5.3	6.3	6.8
Non-teaching and Non-DSH	6.8	6.1	4.4	3.9	3.7	4.2	4.5	4.5	4.7	4.6	5.5	6.1
Rural:												
<50 beds	2.9	1.9	0.1	0.4	0.9	1.7	2.4	2.8	2.6	3.1	2.8	3.8
50-99 beds	4.8	4.3	2.2	2.1	2.5	3.8	4.1	4.5	4.9	4.8	5.5	5.8
100-149 beds	5.4	4.8	3.5	3.9	3.8	4.7	5.0	5.6	6.5	6.2	6.5	7.5
150-199 beds	6.6	6.3	5.9	3.1	4.5	5.2	7.0	7.0	6.0	5.8	6.3	7.7
200+ beds	7.2	8.0	5.7	5.9	6.4	6.4	6.3	6.7	6.8	5.9	6.8	9.1
Urban:												
<100 beds	2.5	3.5	1.5	0.5	0.2	0.1	1.4	0.8	1.6	1.7	2.5	2.9
100-199 beds	7.1	5.8	3.6	2.7	1.8	2.6	2.9	3.2	3.6	4.1	5.0	5.1
200-299 beds	8.2	7.1	4.7	4.0	3.6	3.9	4.3	4.9	4.8	4.6	5.3	6.1
300-399 beds	9.1	7.8	5.8	4.4	5.2	4.5	4.4	4.9	4.4	5.9	6.1	6.5
400-499 beds	7.7	8.2	5.9	5.1	4.3	3.8	4.3	5.2	5.0	4.9	5.1	5.8
500+ beds	8.6	7.4	4.5	4.2	4.5	4.2	2.3	4.7	4.2	3.4	4.2	5.6
New England	4.8	4.6	1.6	2.4	0.9	1.5	2.0	2.2	2.2	3.1	2.6	3.1
Middle Atlantic	6.2	7.1	2.7	2.4	2.1	0.7	0.3	1.4	0.9	1.8	2.6	3.1
South Atlantic	7.9	6.4	5.0	4.8	4.6	4.1	4.6	6.0	6.2	5.7	6.6	7.4
East North Central	6.2	5.7	4.4	3.3	4.0	4.7	4.7	4.8	4.5	4.8	5.6	6.3
East South Central	7.8	7.8	6.5	5.5	5.9	7.3	6.4	6.4	5.6	4.9	5.2	6.7
West North Central	8.4	7.6	5.5	4.3	4.5	4.8	5.0	4.9	4.5	5.0	6.6	7.4
West South Central	9.0	7.2	5.2	3.6	3.9	4.1	4.3	5.8	7.4	6.1	6.8	7.3
Mountain	7.7	7.2	5.4	4.0	3.8	4.3	5.3	5.5	5.4	6.9	7.9	7.7
Pacific	7.1	6.3	4.0	3.4	2.7	3.5	2.8	4.7	4.1	4.0	3.6	4.4
Voluntary	7.7	7.0	4.9	3.8	3.8	3.9	3.9	4.3	4.0	4.1	4.8	5.7
Proprietary	8.8	7.5	5.5	4.6	3.6	3.0	3.8	5.1	6.6	7.2	9.5	9.0
Urban government	4.5	4.5	1.0	2.3	2.2	2.5	1.7	4.5	4.3	4.6	3.5	4.2
Rural government	4.5	2.9	1.9	1.4	2.3	3.3	3.7	4.7	5.2	4.4	4.6	5.8

NOTE: Data for each PPS year are from hospitals' Medicare cost reporting periods beginning during the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning in 1986 and New Jersey beginning in 1989. DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

**Chart B-7. Distribution of Hospital Total Revenue Margins, 1984-1995**

PPS Year	25th Percentile	Median	75th Percentile	Percent of Hospitals with Negative Margin
1984	0.6%	5.2%	9.4%	22.6%
1985	-0.4	4.3	8.8	26.4
1986	-2.5	2.8	7.0	33.4
1987	-2.9	2.4	6.6	35.1
1988	-2.5	2.6	6.6	34.0
1989	-1.7	2.8	6.8	31.9
1990	-0.9	3.2	7.1	28.5
1991	-0.4	3.4	7.2	26.4
1992	-0.2	3.4	7.4	26.2
1993	0.1	3.7	7.6	24.1
1994	0.4	3.9	8.0	21.8
1995	0.8	4.6	8.7	20.7

NOTE: Data for each PPS year are from hospitals' Medicare cost reporting periods beginning during the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning in 1986 and New Jersey beginning in 1989.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

**Chart B-8. Distribution of Hospital Total Revenue Margins, by Hospital Group, 1995**

Hospital Group	25th Percentile	Median	75th Percentile	Percent of Hospitals with Negative Margin
All hospitals	0.8%	4.6%	8.7%	20.7%
Urban	1.0	4.6	8.8	19.5
Rural	0.6	4.5	8.4	22.1
Large urban	0.6	4.0	8.1	21.3
Other urban	1.4	5.3	9.6	17.2
Rural referral	4.1	7.4	10.9	4.8
Sole community	1.0	4.6	8.5	21.2
Other rural	-0.3	3.8	7.8	25.7
Major teaching	0.2	2.8	6.6	21.5
Other teaching	1.7	5.1	9.0	17.3
Non-teaching	0.7	4.6	8.7	21.3
DSH:				
Large urban	0.3	3.7	7.6	22.8
Other urban	2.3	6.3	10.6	14.5
Rural	0.4	4.5	8.6	21.3
Non-DSH	0.8	4.5	8.5	21.4
Teaching and DSH	0.7	4.2	7.8	20.3
Teaching only	2.0	5.3	9.6	14.6
DSH only	1.1	5.0	9.7	19.2
Non-teaching and Non-DSH	0.6	4.4	8.4	22.2
Rural:				
<50 beds	-1.2	3.2	7.3	29.5
50-99 beds	1.3	5.0	8.5	18.2
100-149 beds	3.1	6.4	10.7	10.1
150-199 beds	3.7	7.4	10.1	4.5
200+ beds	4.8	8.2	11.7	1.4
Urban:				
<100 beds	-1.2	2.9	7.3	30.9
100-199 beds	0.7	4.5	8.9	21.5
200-299 beds	2.2	5.5	9.6	13.0
300-399 beds	2.9	5.8	10.1	10.6
400-499 beds	2.2	5.5	10.1	11.9
500+ beds	2.6	5.7	8.2	6.5
New England	0.7	3.0	6.2	17.8
Middle Atlantic	0.1	2.4	4.9	24.0
South Atlantic	1.7	5.8	10.8	17.2
East North Central	1.7	5.1	8.8	16.2
East South Central	1.2	5.3	9.4	20.9
West North Central	0.6	4.9	8.6	22.3
West South Central	-0.3	4.6	9.2	26.3
Mountain	2.0	6.0	10.4	15.0
Pacific	0.1	4.3	8.0	23.9
Voluntary	1.3	4.5	8.4	17.7
Proprietary	0.1	6.6	15.0	24.5
Urban government	-0.1	4.1	7.9	25.5
Rural government	0.0	4.1	7.8	25.2

NOTE: Data for each PPS year are from hospitals' Medicare cost reporting periods beginning during the corresponding federal fiscal year. Analysis excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning in 1986 and New Jersey beginning in 1989. DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.



Post-acute care generally refers to health services received following treatment for an acute illness or injury. The term can encompass an array of services, but typically includes skilled nursing care and physical, occupational, or speech therapy. Four major entities furnish post-acute care services to Medicare beneficiaries—skilled nursing facilities (SNFs), home health agencies, rehabilitation hospitals and units of acute-care hospitals, and long-term care hospitals.

Medicare covers SNF stays for beneficiaries who had a minimum three-day hospital stay and who enter a SNF within 30 days of the hospital discharge. SNFs include hospital-based facilities, free-standing providers, and rural hospital "swing beds" (beds that can be used for either acute or skilled nursing care). Home health agencies furnish home health aide visits and medical social services in addition to skilled nursing and therapy services. Medicare covers home care to beneficiaries who are home-bound and require intermittent skilled nursing services or physical or speech therapy. Once authorized, beneficiaries may receive an unlimited number of home health services on a part-time or intermittent basis.

Medicare-certified rehabilitation facilities must have a total patient population of whom at least 75 percent require intensive rehabilitation for one or more of 10 specified neurological, musculoskeletal, or burn conditions. Medicare-covered patients must receive three or more hours of therapy daily. Long-term care hospitals are those with an average length of stay longer than 25 days. Some long-term care hospitals specialize in physical rehabilitation or in treating ventilator-dependent patients. Others provide more generalized services, including cancer treatment, pain management, and chronic disease care.

In addition to these providers, others deliver post-acute care on an outpatient basis. Those dedicated primarily to post-acute services include rehabilitation agencies, comprehensive outpatient rehabilitation facilities (CORFs), and independent therapist practices. Hospital outpatient departments, physicians' offices, and hospices furnish those services as well.

The availability and use of post-acute care providers has increased rapidly in the 1990s. The two largest provider types—skilled nursing facilities and home health agencies—have grown 6 percent and 9 percent annually since 1990, respectively. The number of long-term care hospitals, rehabilitation agencies, CORFs, and hospices has more than doubled since 1990.

In part to moderate the growth in this area, the Balance Budget Act of 1997 enacted numerous provisions affecting post-acute care. Skilled nursing facility prospective payment was initiated in July 1998, and prospective payment systems are scheduled for home health agencies in October 1999 and for rehabilitation facilities in October 2000. In addition, a report by the Secretary of Health and Human Services on long-term care hospital prospective payment is due to the Congress by October 1999.

This chapter provides a baseline for examining expected changes in post-acute care. Trends in Medicare spending, service utilization, and provider financial performance are presented.

**Chart 4-1. Number of Medicare-Certified Post-Acute Care Facilities, 1990-1997**

Type of Provider	1990	1992	1994	1996	1997	Average Annual Increase
Skilled nursing facility	10,508	12,174	13,878	15,553	16,161	6.3%
Hospital-based	1,145	1,352	1,718	2,084	212	9.4
Free-standing	8,120	9,502	10,818	12,086	12,636	6.5
Swing-bed hospital	1,243	1,320	1,342	1,383	1,383	1.8
Rehabilitation facility	813	923	1,019	1,048	1,080	4.1
Hospital	135	164	195	189	198	5.6
Unit	678	759	824	859	882	3.8
Long-term care hospital	90	102	146	185	200	12.1
Home health agency	5,793	6,419	8,057	9,886	10,582	9.0
Hospital-based	1,543	1,786	2,207	2,593	2,702	8.3
Free-standing	4,135	4,526	5,720	7,104	7,676	9.2
Rehabilitation hospital or SNF-based	115	107	130	189	204	8.5
Rehabilitation agency	1,241	1,481	1,996	2,469	2,770	12.2
Comprehensive outpatient rehabilitation facility	191	217	257	403	523	15.5
Hospice	902	1,208	1,667	2,135	2,279	14.2
Hospital or SNF-based	267	340	430	543	576	11.6
Home health agency-based	344	404	615	812	830	13.4
Free-standing	291	464	622	780	873	17.0

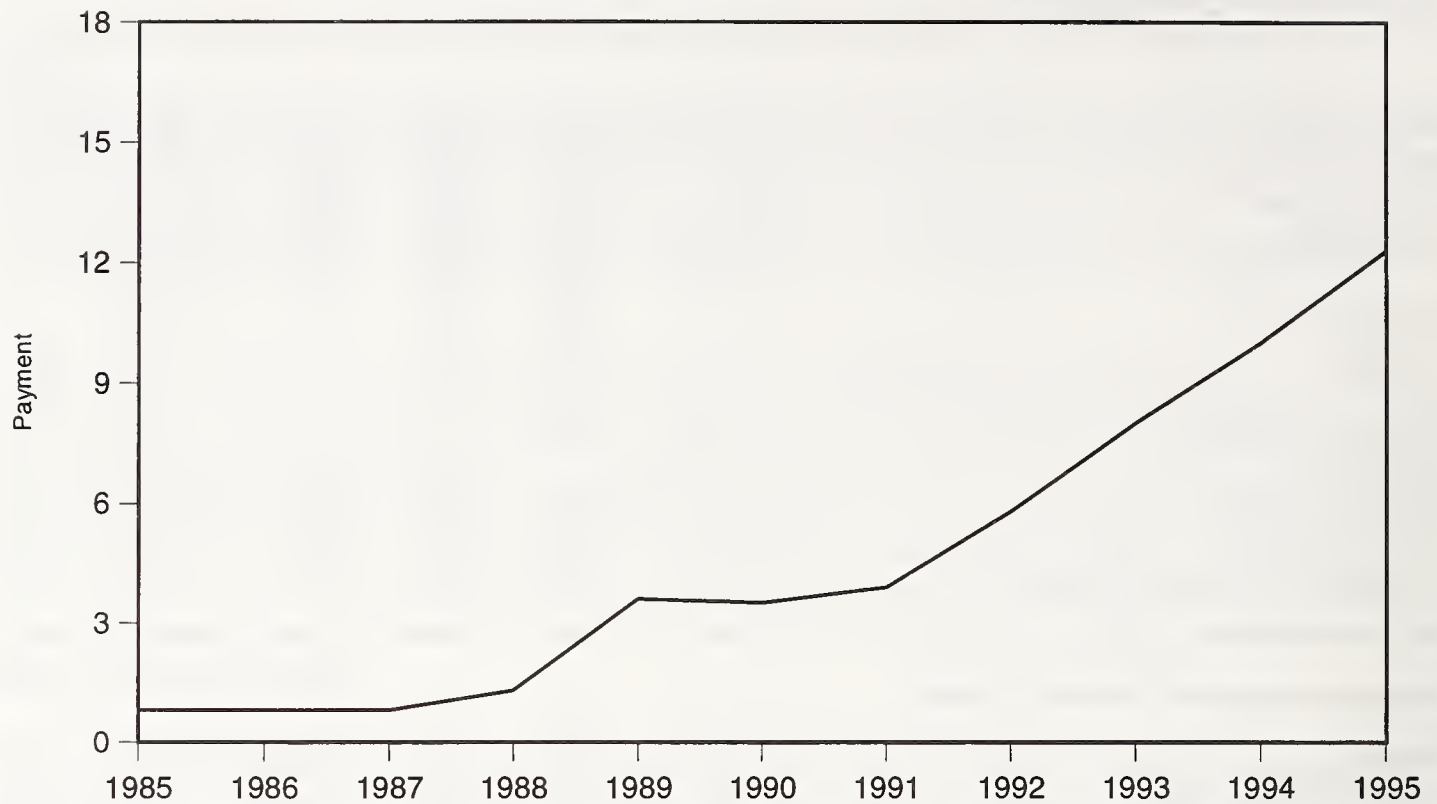
NOTE: Data are as of December of each year unless otherwise noted. SNF = skilled nursing facility.

SOURCE: Health Care Financing Administration, Center for Medicaid and State Operations.

As the provision of health care services has continued to shift away from the acute care setting, the number of post-acute care providers has steadily risen. The most common type of these providers, skilled nursing facilities (SNFs), grew about 6 percent annually in the 1990s, to over 16,000 in 1997. Although the number of hospital-based SNFs grew more rapidly, free-standing facilities account for more than three-quarters of all SNFs. Among all post-acute providers, the number of rehabilitation facilities has risen relatively slowly (4 percent annually) in the 1990s, to almost 1,100 by 1997. Long-term care hospitals make up the smallest post-acute provider group—they numbered 200 in 1997, up from 90 in 1990.

The number of home health agencies nearly doubled since 1990, growing 9 percent annually to reach 10,500 by 1997. Over 70 percent of home health agencies are free-standing. Since 1990, the number of rehabilitation agencies increased over 12 percent, and totaled almost 2,800 by 1997. The number of comprehensive outpatient rehabilitation facilities (CORFs) rose from 191 in 1990 to 523 by 1997. Hospices, which aim to provide palliative care, also sometimes furnish post-acute care. The number of those providers rose over 14 percent annually, from about 900 in 1990 to almost 2,300 by 1997.

**Chart 4-2. Medicare Part A Skilled Nursing Facility Payments, 1985-1995 (In Billions of Dollars)**



NOTE: Payments include program and beneficiary expenditures.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare spending data from the Health Care Financing Administration.

SNF payments have been among the fastest growing components of Medicare spending, increasing 33 percent annually, on average, since 1986. Part A SNF expenditures reached an estimated \$12.3 billion by 1995.



**Chart 4-3. Medicare Skilled Nursing Facility Use, 1986-1996**

Year	People Served		Days	
	Number (In Thousands)	Per 1,000 Enrollees	Number (In Millions)	Per Person Served
1986	304	10	8.2	26.8
1987	293	9	7.4	25.4
1988	384	12	10.7	27.8
1989	636	19	29.8	46.9
1990	638	19	23.8	37.3
1991	671	19	22.3	33.2
1992	785	22	27.0	34.4
1993	908	25	31.2	34.4
1994	1,068	29	38.0	35.6
1995	1,240	33	43.3	34.9
1996	1,384	36	47.7	34.5
Average Annual Increase	16.4%	13.7%	19.3%	2.6%

SOURCE: Health Care Financing Administration, Office of the Actuary.

The surge in the use of SNF services began in the late 1980s, largely because of changes in Medicare's benefit and certification policies that increased both the supply of SNF beds and the number of enrollees meeting the requirements for SNF care. Between 1986 and 1996, the number of beneficiaries admitted to SNFs rose, on average, 14 percent each year, climbing from 304,000 to 1.4 million. By 1996, almost 4 percent of all Medicare enrollees received SNF care, compared with just 1 percent a decade earlier. The total number of Medicare-covered SNF days grew from 8.2 million in 1986 to 47.7 million in 1996.

**Chart 4-4. Medicare Admissions and Covered Days, by Type of Skilled Nursing Facility, Selected Years**

Type of Facility	Share of Admissions			Share of Days			Days Per Admission		
	1990	1994	1996	1990	1994	1996	1990	1994	1996
All	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	28.1	28.1	25.3
Freestanding	73.1	67.9	63.9	82.0	81.6	79.9	31.5	33.8	31.5
Hospital-based	20.5	27.3	32.0	14.9	16.5	18.4	20.5	17.0	14.5
Swing-bed	6.4	4.8	4.1	3.0	2.0	1.7	13.3	11.5	10.3

NOTE: Columns may not sum to 100 percent due to rounding. 1990 and 1994 are fiscal year data, 1996 is calendar year data.

SOURCE: Medicare Payment Advisory Commission analysis of MedPAR data from the Health Care Financing Administration.

Skilled nursing services are provided in free-standing and hospital-based SNFs. The patterns of care furnished by different types of SNFs vary widely. Although hospital-based facilities accounted for 32 percent of SNF admissions in 1996, they furnished only 18 percent of all Medicare-covered SNF days. By comparison, free-standing SNFs accounted for 64 percent of SNF admissions but 80 percent of all days.

That discrepancy is due to the greater lengths of stay in free-standing SNFs. In 1996, beneficiaries treated in such facilities stayed an average of 32 days, while stays in hospital-based SNFs averaged 15 days. Although length of stay in free-standing facilities had been increasing, it fell from 34 days in 1994 to 32 days in 1996. Length of stay for beneficiaries treated in hospital-based facilities continued to decline, falling from 21 days in 1990 to 15 days in 1996.

**Chart 4-5. Medicare Part A Skilled Nursing Facility  
Average Costs Per Day, by Type of Facility,  
Fiscal Year 1995**

Type of Facility	Average Costs Per Day*		
	Routine	Ancillary	Total
All	\$163	\$130	\$293
Free-standing	129	125	254
Hospital-based	292	149	441

NOTE: Swing-bed skilled nursing facilities and those paid on a prospective basis (facilities with fewer than 1,500 Medicare days per year) are not included.

\* Costs were standardized using Medicare's hospital wage index.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The costs of caring for SNF patients vary substantially across provider types. Part A costs in free-standing SNFs averaged \$254 per day in 1995, while those for hospital-based facilities were \$441. That gap was due primarily to differences in routine costs per day, which were more than twice as high in hospital-based facilities compared with free-standing SNFs.



**Chart 4-6. Characteristics of Medicare Beneficiaries Using Skilled Nursing Facilities, by Type of Facility, 1996**

Characteristic	All Skilled Nursing Facilities	Free-standing	Hospital-Based	Swing-Bed Hospital
Women	66.0%	66.6%	65.0%	63.9%
Men	34.0	33.3	35.0	36.1
Age				
<65	4.4	4.0	5.9	4.1
65-74	21.7	18.7	27.3	22.0
75-84	41.0	40.7	41.4	42.0
85+	32.8	36.7	25.5	32.0
Medicare status				
Aged	94.2	94.7	92.9	95.7
Disabled	4.0	3.5	5.1	3.9
End-stage renal disease	1.8	1.8	2.0	0.4

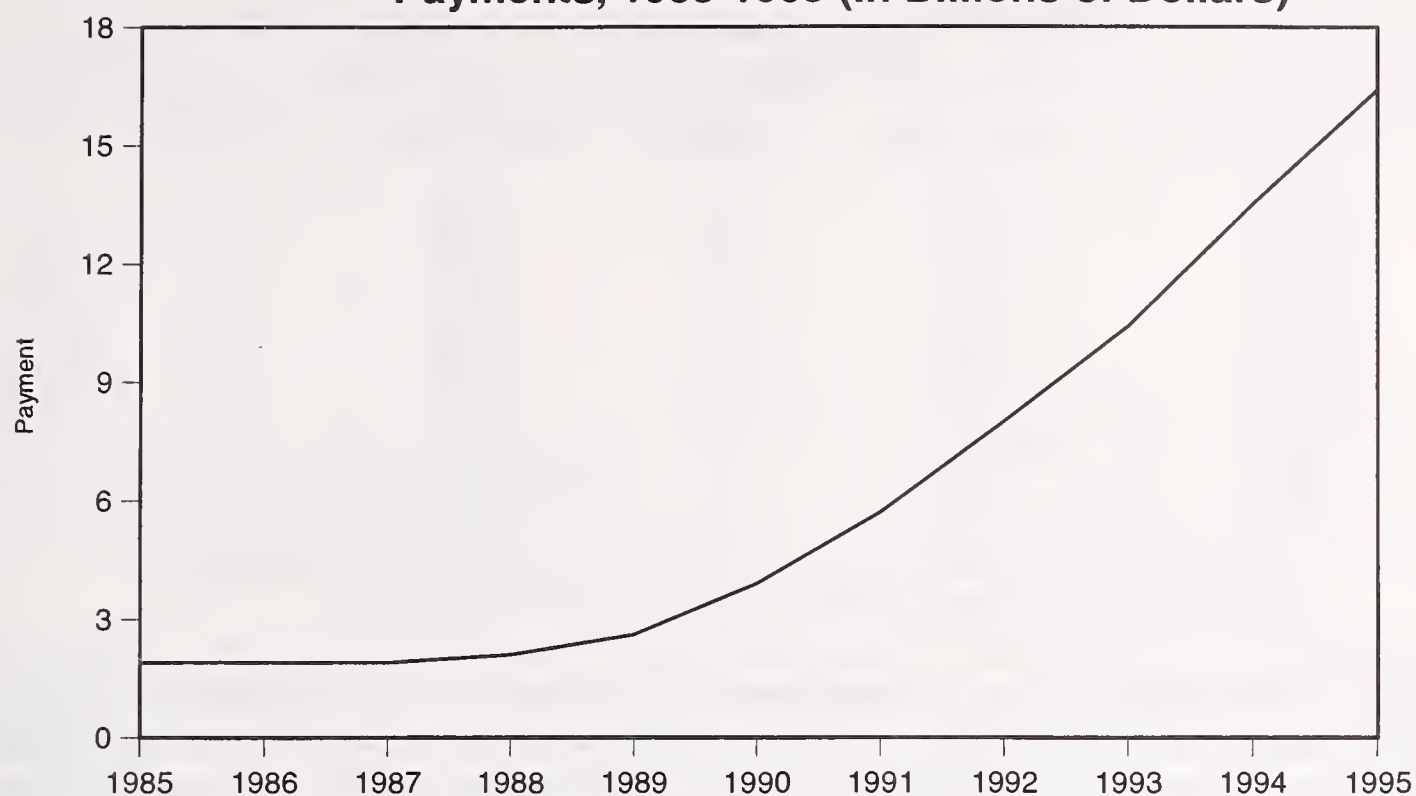
NOTE: Percentages in columns may not sum to 100 due to rounding.

SOURCE: Medicare Payment Advisory Commission analysis of MedPAR data from the Health Care Financing Administration.

Compared to the overall Medicare population, SNF users are more likely to be female and over the age of 75. Disabled beneficiaries and persons with end-stage renal disease are less likely to receive SNF services.

The characteristics of beneficiaries admitted to SNFs differs across types of facilities. Free-standing facilities are more likely than hospital-based providers to care for patients who are 85 and older, a population that tends to have greater functional limitations and comorbidities and therefore may require longer stays.

**Chart 4-7. Medicare Part A Home Health Agency Payments, 1985-1995 (In Billions of Dollars)**



NOTE: Payments include program and beneficiary expenditures.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare spending data from the Health Care Financing Administration.

Medicare pays home health agencies their costs, subject to limits. In fiscal year 1998, the limits were set at the lower of 105 percent of the median per visit cost of free-standing agencies or a blend of agency-specific per beneficiary costs and the per beneficiary costs of agencies in the region. Beneficiaries pay no coinsurance for home health services.

From 1985 through 1995, Medicare Part A expenditures for home health services have increased on average 24 percent annually, from \$2 million to about \$17 million. The increase in expenditures was due to both increases in the number of beneficiaries who used home health services and growth in the number of visits received.

**Chart 4-8. Medicare Part A Home Health Care Use, 1983-1997**

Year	People Served		Visits	
	Number (In Thousands)	Per 1,000 Enrollees	Number (In Thousands)	Per Person Served
1983	1,318	45	36,899	28
1984	1,498	50	40,420	27
1985	1,549	51	39,449	25
1986	1,571	51	37,997	24
1987	1,544	49	35,587	23
1988	1,582	51	37,130	23
1989	1,685	58	46,297	27
1990	1,940	65	69,389	36
1991	2,226	72	98,650	44
1992	2,523	80	132,494	53
1993	2,868	87	168,029	59
1994	3,175	93	220,495	69
1995	3,457	95	266,261	77
1996	3,583	88	283,939	79

SOURCE: Health Care Financing Administration, Office of the Actuary, December 1997.

Before 1980, beneficiaries could receive home health services only after a three-day hospital stay and were limited to 100 visits per year. These policies were removed by the Omnibus Budget Reconciliation Act of 1980, which allowed more beneficiaries to be eligible for home health care and permitted more visits for those who qualified. In response to a rapid increase in expenditures, the Health Care Financing Administration (HCFA) issued guidelines to its intermediaries aimed to curb utilization of home health services. These guidelines were the basis of a class action lawsuit in 1988, in which the court ruled that HCFA's policies were overly restrictive. Largely because of that case, both the number of beneficiaries receiving home care services and the number of visits per user began to climb. In 1996, one in ten beneficiaries received Medicare-covered home health services. The number of visits per user increased as well, almost tripling between 1988 and 1996.



**Chart 4-9. Home Health Visits Per User, Fiscal Year 1996**

Number of Visits Per User	Share of Total Users	Share of Visits		
		Total	Skilled Nursing	Home Health Aide
Total	100.0%	100.0%	100.0%	100.0%
1-9	22.2	1.5	2.8	0.2
10-29	28.9	7.1	11.1	2.1
30-49	13.0	6.9	9.4	3.4
50-99	14.6	14.0	17.2	9.6
100-149	6.7	11.2	11.5	10.7
150-199	4.7	11.0	9.2	12.9
200-249	2.8	8.6	7.0	10.3
250-299	2.0	7.6	5.6	9.9
300+	5.0	32.1	26.3	40.8

NOTE: Columns may not sum to 100 due to rounding.

SOURCE: Medicare Payment Advisory Commission analysis of a 20 percent sample of 1996 home health claims from the Health Care Financing Administration.

The number of home health visits varies widely among Medicare beneficiaries using home health care. The majority of users receive relatively few visits, while a small proportion of beneficiaries make extensive use of home care. In 1996, 51 percent of home health users received fewer than 30 visits. That group of beneficiaries accounted for only about 9 percent of Medicare-covered home health services furnished in that year. By contrast, about 15 percent of home health users received 150 visits or more, accounting for more than half of all visits. Of these heavy users, one-third (or 5 percent of all users) received over 300 visits. That group accounted for one-third of all visits, one-quarter of skilled nursing visits, and about 40 percent of home health aide visits furnished in that year.

**Chart 4-10. Skilled Nursing and Home Health Aide Visits Per User as a Percent of Total Home Health Visits, Fiscal Year 1996**

Number of Visits Per User	Visits as a Percentage of Total	
	Skilled Nursing	Home Health Aide
1-9	75.5%	6.4%
10-29	64.5	14.5
30-49	56.5	24.4
50-99	50.7	33.7
100-149	42.2	46.5
150-199	34.6	57.6
200-249	33.7	58.7
250-299	30.3	63.5
300+	33.7	62.2

NOTE: Rows will not sum to 100. Remaining shares represent physical, occupational, and speech therapy, as well as medical social services.

SOURCE: Medicare Payment Advisory Commission analysis of a 20 percent sample of 1996 home health claims from the Health Care Financing Administration.

Overall, home health aide visits represented 49 percent of all home health visits while skilled nursing visits account for 41 percent. The mix of services, however, differs dramatically across home health users. Individuals receiving few total visits use a greater proportion of skilled nursing visits to aide visits. In 1996, three-quarters of all visits furnished to individuals receiving 9 or fewer visits were for skilled nursing care, while 6 percent were home health aide services. Conversely, beneficiaries who used 100 visits or more received a larger share of aide visits, suggesting a greater need for personal care assistance. About three-fifths of all visits received by the heaviest users were home health aide visits while one-third were for skilled nursing care.

**Chart 4-11. Distribution of Home Health Visits, by Episode Category, Fiscal Year 1996**

Episode Category	Share of All Episodes	Share of Visits		
		All	Skilled Nursing	Home Health Aide
Short	22.2%	3.1%	4.5%	1.2%
Medium	25.8	13.1	15.5	7.8
Long	2.7	3.1	3.6	2.3
Very long	2.6	4.7	5.3	3.8
Continuous	10.9	38.1	32.1	48.0
Crossover	35.6	37.9	39.0	37.0

NOTE: Columns may not sum to 100 due to rounding. Short, medium, long, and very long episodes are a series of home health visits preceded and followed by a 60-day period without home health use. Short episodes lasted 30 days or less, medium episodes lasted 31 to 120 days, long episodes lasted 121-165 days, and very long episodes lasted 166 to 366 days. Continuous episodes are those without a 60-day service gap during the period of analysis. Cross-over episodes are those with a 60-day service gap either before the first visit or after the last one, but not both.

SOURCE: Medicare Payment Advisory Commission analysis of a 20 percent sample of 1996 home health claims from the Health Care Financing Administration.

In 1996, nearly half of all episodes of home health utilization were short or medium in duration while 11 percent lasted longer than 12 months. Short- and medium-length episodes accounted for about 16 percent of all home health visits, while 38 percent of the visits occurred during continuous episodes of care (those without a 60-day service gap during the period of analysis).



**Chart 4-12. Characteristics of Home Health Care Users, by Episode Category, Fiscal Year 1996**

Characteristic	Episode Category				
	Short	Medium	Long	Very Long	Continuous
Age					
< 65	22.4%	23.9%	3.0%	2.9%	11.5%
65-74	25.5	27.4	2.6	2.5	8.7
75-84	21.6	26.2	2.7	2.5	10.9
85+	18.9	23.9	2.6	2.6	13.2
Medicare status					
Aged	22.2	26.0	2.6	2.5	10.8
Disabled	21.8	23.7	2.9	2.9	12.3
End-stage renal disease	25.1	26.1	3.2	3.6	5.9
Race					
White	23.2	26.2	2.6	2.5	10.3
Black	14.6	22.9	2.9	3.0	15.9
Other*	22.4	27.0	3.1	2.9	8.4

NOTE: Rows will not sum to 100. Remaining shares represent cross-over episodes which are those with a 60-day gap either before the first visit or after the last one, but not both. Short, medium, long, and very long episodes are a series of home health visits preceded and followed by a 60-day period without home health use. Short episodes lasted 30 days or less, medium episodes lasted 31 to 120 days, long episodes lasted 121 to 165 days and very long episodes lasted 166 to 366 days. Continuous episodes are those without a 60-day service gap; these lasted longer than 12 months.

\* Includes Native Americans, Asians, Hispanics, other, and unknown races.

SOURCE: Medicare Payment Advisory Commission analysis of a 20 percent sample of 1996 home health claims from the Health Care Financing Administration.

Age, disability, and race appear to be related to home health care use. The oldest Medicare beneficiaries use a disproportionate amount of home health services. Beneficiaries who were age 85 and older represented 10 percent of the Medicare population in 1996, yet accounted for over 20 percent of all home health episodes. African American beneficiaries also use a disproportionate share of home health services. In 1996, this group represented about 9 percent of the Medicare population and accounted for about 12 percent of all Medicare home health episodes furnished that year. The length of home health episodes differs by beneficiary characteristics. Beneficiaries who are 85 and older are more likely to have continuous episodes of care. Thirteen percent of the episodes received by the oldest old were continuous compared with less than 9 percent of those received by beneficiaries age 65 to 74. African American and disabled beneficiaries were also more likely to have continuous episodes.

**Chart 4-13. Distribution of Home Health Episodes, by Type of Agency, Fiscal Year 1996**

Agency Type	Share of All Episodes	Episode Category				
		Short	Medium	Long	Very Long	Continuous
Free-standing	35.9%	29.7%	32.6%	37.0%	40.8%	44.2%
Hospital-based	37.6	43.9	40.2	35.6	34.0	30.0
Government	8.4	7.3	7.7	8.5	8.1	11.3
Visiting Nurse Association	17.2	18.3	18.5	18.0	16.4	14.0
Other*	0.7	0.7	0.9	0.8	0.6	0.4

NOTE: Columns may not sum to 100 due to rounding. Short, medium, long, and very long episodes are a series of home health visits preceded and followed by a 60-day period without home health use. Short episodes lasted 30 days or less, medium episodes lasted 31 to 120 days, long episodes lasted 121 to 165 days and very long episodes lasted 166 to 366 days. Continuous episodes are those without a 60-day service gap; these lasted longer than 12 months.

\* Includes services provided in Skilled Nursing and Rehabilitation facilities.

SOURCE: Medicare Payment Advisory Commission analysis of a 20 percent sample of 1996 home health claims from the Health Care Financing Administration.

Home health services may be provided by free-standing agencies, visiting nurse associations, as well as agencies based in hospitals, skilled nursing facilities, and rehabilitation facilities. Agencies may be voluntary, proprietary, or government controlled. Patterns of care differ across agency types.

In 1996, facility-based agencies furnished approximately 38 percent of all episodes and were responsible for a larger share of short episodes—about 45 percent compared with 30 percent of continuous ones. Free-standing agencies provided about 36 percent of all home health episodes. Those agencies were more likely to treat patients with longer episodes of care. Freestanding facilities provided about 30 percent of short episodes and 44 percent of continuous ones.

**Chart 4-14. Average Home Health Agency Costs Per Visit, by Type of Agency, 1995**

Agency Type	Skilled Nursing	Physical Therapy	Occupational Therapy	Speech Pathology	Medical Social Services	Home Health Aide
All	\$90	\$99	\$101	\$105	\$141	\$40
Urban	88	96	99	100	135	40
Rural	98	117	123	126	166	40
Large	89	97	100	103	138	39
Medium	93	104	105	109	152	39
Small	100	113	115	118	162	43
High share of aide visits	90	101	105	108	142	39
Low share of aide visits	91	97	99	102	139	42
Visiting Nurse Association	77	78	82	84	119	38
Other free-standing	88	100	103	108	138	39
Facility-based	103	109	111	112	160	42
Voluntary	91	94	95	98	137	40
Proprietary	89	105	110	113	142	40
Government	94	101	102	107	162	39

NOTE: Agencies with a high share of aide visits were those in which 40 percent or more of visits were from aides. Small agencies provided fewer than 12,500 Medicare-covered visits annually. Large agencies provided more than 25,000 visits annually. Costs were standardized using the hospital wage index and weighted by visits.

SOURCE: Medicare Payment Advisory Commission analysis of Cycle 13 home health agency cost reports from the Health Care Financing Administration.

Cost differences are seen across types of home health agencies. In 1995, visiting nurse association agencies generally had lower per visit costs than other agencies. Size (as measured by the volume of Medicare-covered visits furnished) also was an important predictor of costs. As agency size increased, the per visit costs for all types of home health services decreased. The variation found among agencies may occur because of differences in practice protocols or types of patients served. Alternatively, the high costs of some agencies may be due in part to cost allocation practices. For example, overhead costs for facility-based agencies may have been allocated to the home health agency from another part of the institution.



**Chart 4-15. Relationship of Medicare Payments and Costs in Home Health Agencies, by Type of Agency, 1995**

Agency Type	Payment-to-Cost Ratio	Percentage of Agencies Over Payment Limits
All	0.98	25.7%
Urban	0.98	24.3
Rural	0.98	28.8
Large	0.99	15.8
Medium	0.97	20.2
Small	0.93	35.8
High share of aide visits	0.99	21.7
Low share of aide visits	0.97	35.4
Visiting Nurse Association	1.00	5.8
Other free-standing	0.99	18.9
Facility-based	0.95	47.0
Voluntary	0.97	31.2
Proprietary	0.99	20.2
Government	0.96	34.3

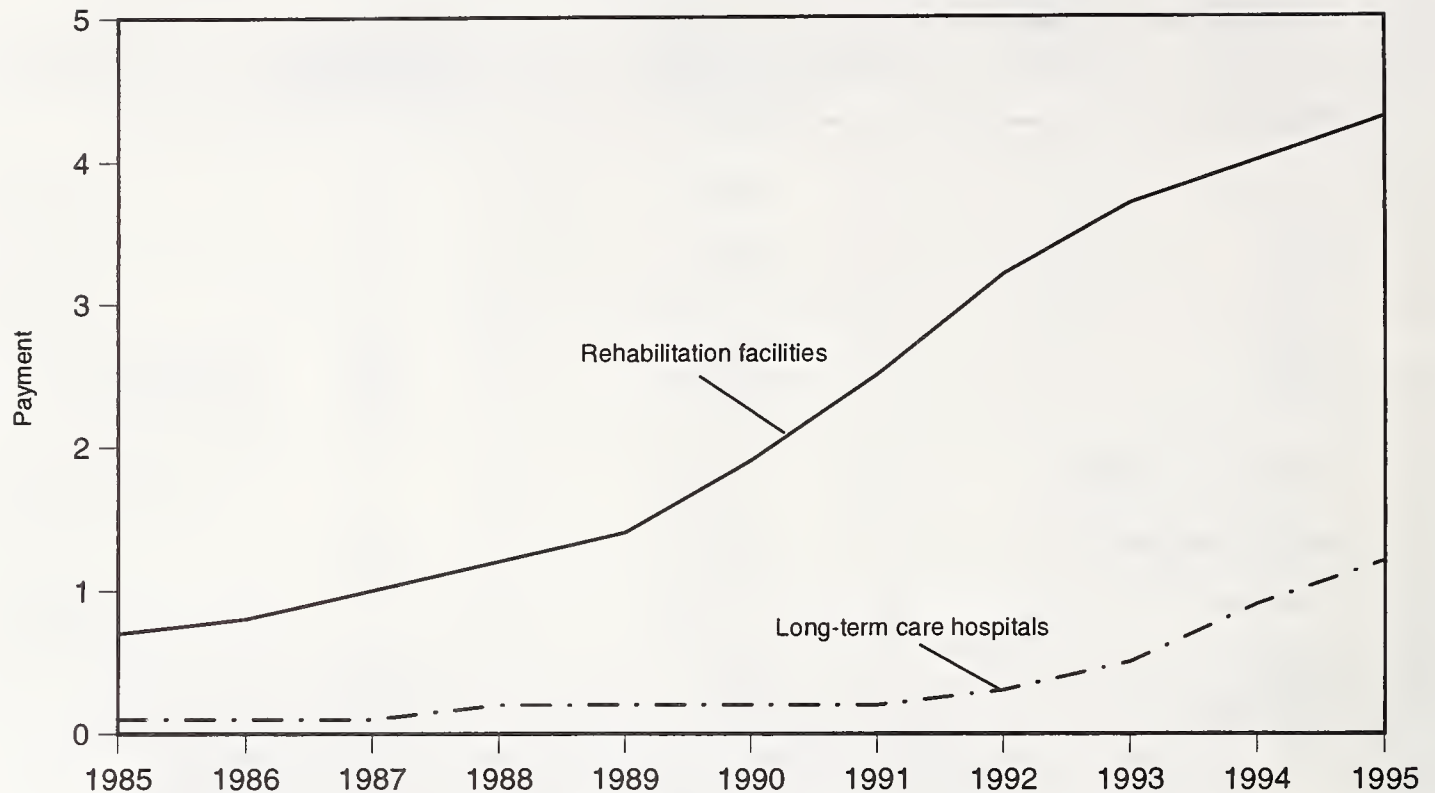
NOTE: Agencies with a high share of aide visits were those in which 40 percent or more of visits were from aides. Small agencies provided fewer than 12,500 Medicare-covered visits annually. Large agencies provided more than 25,000 visits annually. Facility-based agencies include those in hospitals, skilled nursing facilities, and comprehensive outpatient rehabilitation facilities. Costs were standardized using the hospital wage index.

SOURCE: Medicare Payment Advisory Commission analysis of Cycle 13 home health agency cost reports from the Health Care Financing Administration.

Medicare pays home health agencies based on their costs, subject to limits applied to aggregate costs for each type of visit. That policy allows agencies to cross-subsidize among visit types. The ability of an agency to do so is constrained by the relative volume of different services. Because patients require a relatively large share of skilled nursing and home health aide visits, an agency's ability to control costs for those visits determines its financial performance under Medicare.

Visiting nurse association and other free-standing agencies, which had low costs for aide visits in 1995, had higher payment-to-cost ratios than facility-based agencies. Free-standing agencies also had lower skilled nursing costs than the facility-based providers. Voluntary agencies, which had low aide costs, performed better than government agencies but worse than proprietary ones, which had slightly higher aide costs but lower skilled nursing costs.

**Chart 4-16. Medicare Rehabilitation Facility and Long-Term Care Hospital Payments, 1985-1995 (In Billions of Dollars)**



NOTE: Payments include program and beneficiary expenditures.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare spending data from the Health Care Financing Administration.

Medicare payments to rehabilitation and long-term care facilities are based on their allowable costs per discharge, subject to limits established in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). A facility is paid the lesser of its average costs per discharge or target amount. That amount equals a provider's average costs per discharge in a designated base year, updated to the current year. In addition, a facility receives a bonus payment if its costs are less than its target, while some facilities receive relief payments if their costs are above their targets.

Medicare payments to rehabilitation facilities grew 20 percent annually between 1985 and 1995, from \$70 million to \$430 million. In 1995, 60 percent of these payments went to rehabilitation units (which comprise over 80 percent of rehabilitation facilities). Largely reflecting a rise in the number of facilities, payments to long-term care hospitals rose 28 percent a year between 1985 and 1995, from \$10 million to \$120 million.

**Chart 4-17. Medicare Discharges and Average Length of Stay in Rehabilitation and Long-Term Care Facilities, Fiscal Years 1990-1995**

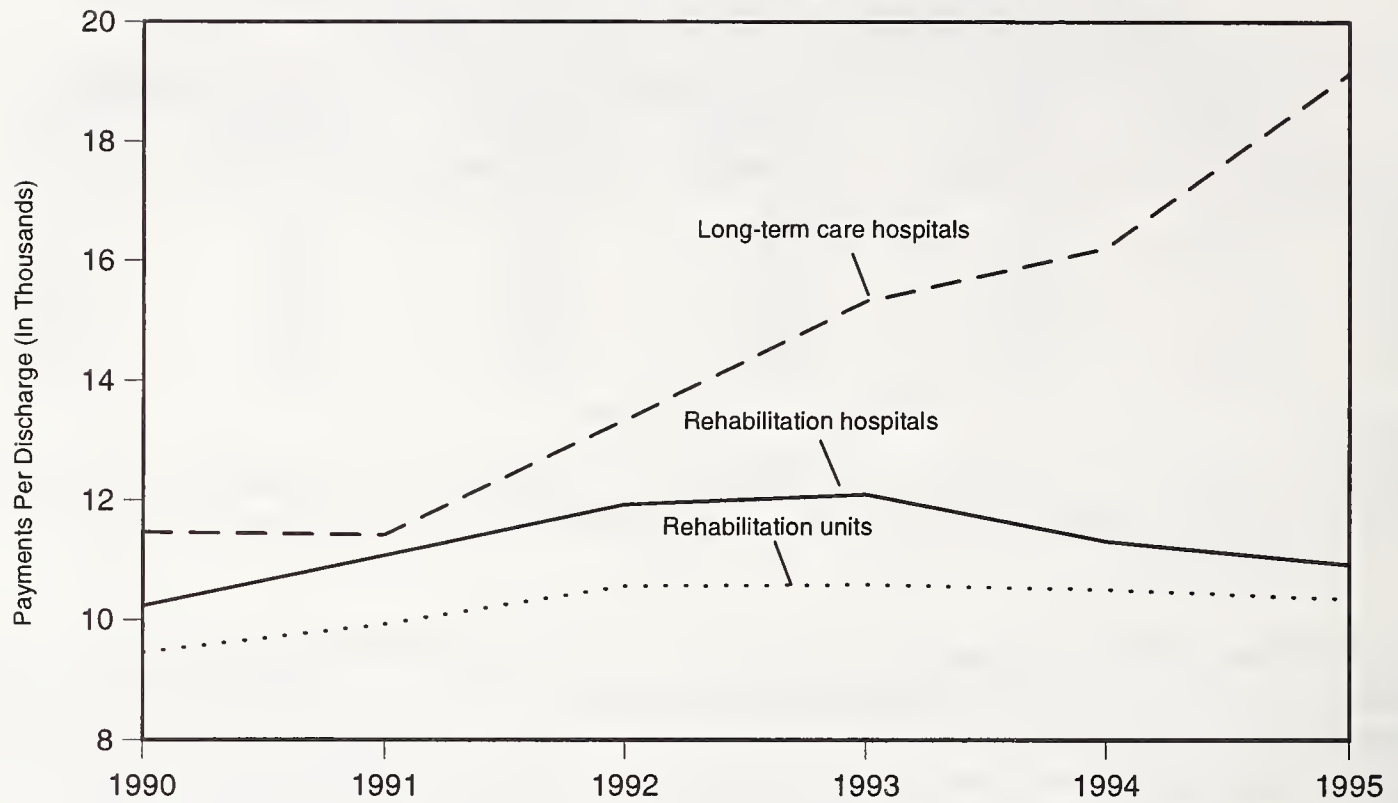
Year	Rehabilitation Hospital		Rehabilitation Unit		Long-Term Care Hospital	
	Discharges (In Thousands)	Length of Stay (In Days)	Discharges (In Thousands)	Length of Stay (In Days)	Discharges (In Thousands)	Length of Stay (In Days)
1990	55.8	27.7	114.2	21.9	15.3	36.9
1991	64.4	26.5	133.6	20.7	16.5	34.1
1992	75.8	24.9	151.5	20.0	19.8	32.8
1993	67.7	24.1	170.3	18.5	23.5	34.0
1994	90.3	21.5	186.9	17.4	27.4	40.3
1995	94.3	21.0	190.3	16.5	36.7	36.2
Average Annual Change	11.0%	-5.5%	10.8%	-5.5%	19.2%	-0.4%

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Rehabilitation facilities have markedly reduced the average length of stay of their patients. Among Medicare patients, stays in rehabilitation hospitals dropped from 28 days in 1990 to 21 days by 1995, while stays in rehabilitation units fell from 22 days to 16 days. During that time, the number of Medicare discharges grew about 11 percent annually, totaling 94 thousand in hospitals and 190 thousand in rehabilitation units by 1995. In long-term care hospitals, the average Medicare length of stay remained at 36 days. Reflecting growth in the number of these hospitals, the number of discharges rose almost 20 percent a year between 1990 and 1995, reaching 37 thousand by 1995.



**Chart 4-18. Average Medicare Payments Per Discharge in Rehabilitation and Long-Term Care Facilities, Fiscal Years 1990-1995**



NOTE: Payments include both program and beneficiary liabilities.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Medicare payments per discharge to rehabilitation facilities have remained relatively stable during the 1990s, while per discharge payments have risen rapidly in long-term care hospitals. Per discharge payments to rehabilitation hospitals rose almost 6 percent annually between 1990 and 1993, but fell slightly between 1993 and 1995 to \$11,000. Payments to rehabilitation units also grew more quickly in the early 1990s, but remained near \$10,500 per discharge between 1993 and 1995. By contrast, per discharge payments to long-term care hospitals climbed 11 percent annually, from \$11,500 in 1990 to \$19,000 by 1995.

**Chart 4-19. Relationship of Medicare Payments and Costs in Rehabilitation and Long-Term Care Facilities, Fiscal Years 1990-1995**

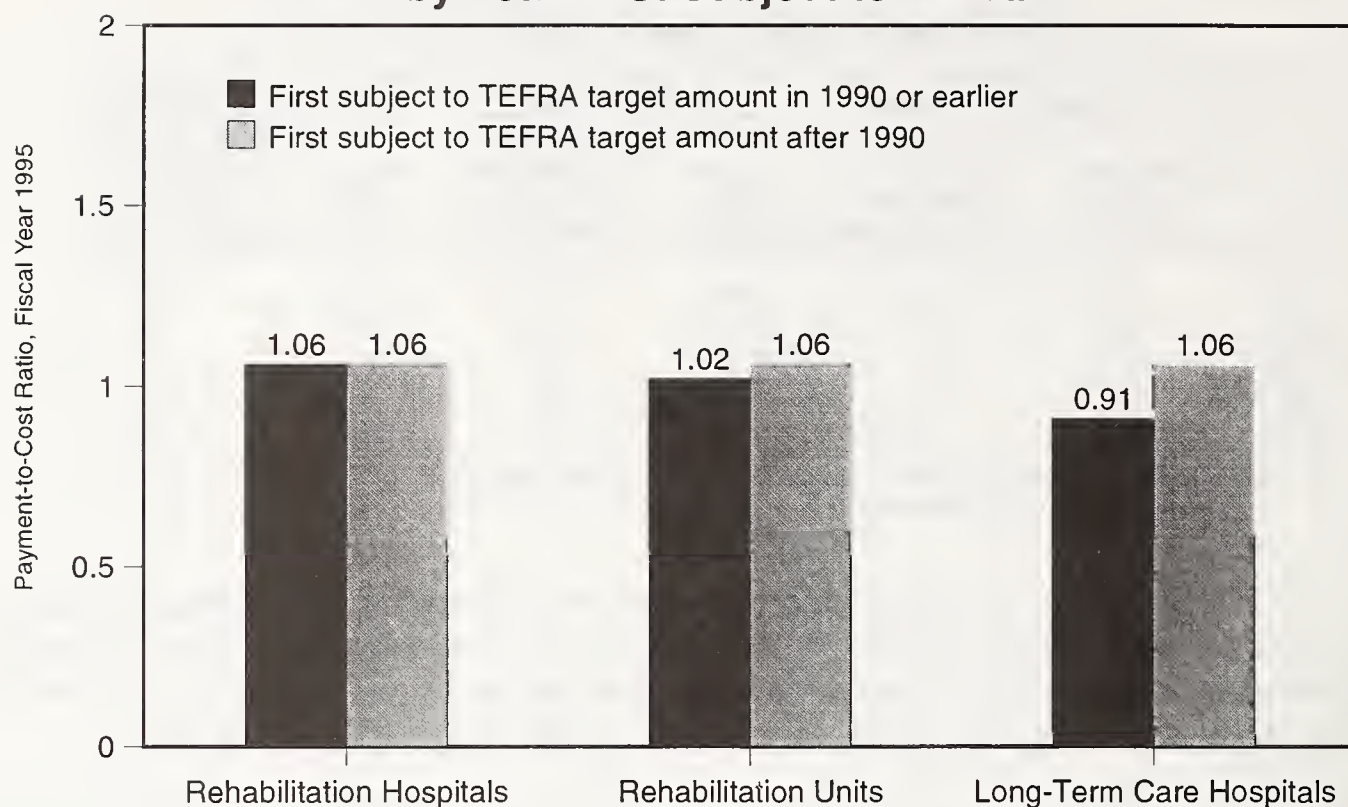
Year	Rehabilitation Hospitals		Rehabilitation Units		Long-Term Care Hospitals	
	Payment-to-Cost Ratio	Share of Facilities with Costs Over Target Amount	Payment-to-Cost Ratio	Share of Facilities with Costs Over Target Amount	Payment-to-Cost Ratio	Share of Facilities with Costs Over Target Amount
1990	0.76	24%	0.88	50%	0.70	54%
1991	0.78	19	0.90	40	0.64	51
1992	0.89	15	0.95	33	0.80	45
1993	0.93	10	0.98	28	0.85	39
1994	1.01	8	1.01	21	0.87	23
1995	1.07	4	1.04	17	0.99	22

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

During the 1990s, ratios of Medicare aggregate payments to costs of rehabilitation and long-term care hospitals have increased steadily. By 1995, payments exceeded costs by 7 percent among rehabilitation hospitals, and by 4 percent among rehabilitation distinct-part units. By contrast, aggregate payments to long-term care hospitals were 1 percent under costs in that year.

The percentage of facilities whose costs exceed their payment limits (target amounts) has declined steadily, indicating improved financial performance for both rehabilitation and long-term care facilities. In 1995, the share of rehabilitation hospitals and units whose costs exceeded their aggregate target was 4 percent and 17 percent, respectively. A larger share (22 percent) of long-term care hospitals exceeded their targets. Factors contributing to these providers' improved performance included a growing number of new facilities (which generally have obtained higher target amounts), falling average lengths of stay, and declining costs per discharge.

**Chart 4-20. Medicare Payment-to-Cost Ratios for Rehabilitation and Long-Term Care Facilities, by Year First Subject to TEFRA**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Despite the overall financial improvement among providers under TEFRA, a significant disparity in performance exists based on the number of years a facility has been subject to its TEFRA target amount. Newer facilities have performed better under TEFRA. In 1995, the ratio of aggregate payments to costs among newer long-term care hospitals was 1.06, compared to 0.91 among older hospitals. The payment-to-cost ratio among newer rehabilitation units was 1.06, while the ratio among older units was 1.02.



**Chart 4-21. Medicare Spending for Outpatient Therapy, by Type of Provider, 1990 and 1996**

Type of Provider	Payment (In Millions)		Share of Payments		Average Annual Change in Payments	Share of Outpatient Therapy Users, 1996
	1990	1996	1990	1996		
Total	\$353	\$962	100.0%	100.0%	18%	100.0%
Hospital outpatient department	183	323	52.0	33.6	10	66.4
Acute care hospital	—	273	—	28.4	—	61.4
Rehabilitation hospital	—	50	—	5.2	—	4.6
Rehabilitation agency	151	524	43.0	54.5	23	29.2
Comprehensive Outpatient Rehabilitation Facility	19	115	5.0	12.0	35	4.4

NOTE: Payments are interim program payments.

SOURCE: Medicare Payment Advisory Commission analysis of the 5 percent outpatient claims file.

For the purposes of Medicare payment, rehabilitation services generally can be viewed as outpatient rehabilitation when they are paid for outside of Medicare's inpatient, skilled nursing facility, and home health benefits. Facilities that furnish outpatient rehabilitation services include hospital rehabilitation agencies and CORFs.

Medicare expenditures for outpatient rehabilitation rose 18 percent annually in the 1990s, totaling \$962 million by 1996. In 1990, half of Medicare's outpatient therapy payments were made to hospitals. Since then, increasing payments to agencies and CORFs have outstripped the growth of payments to hospitals. Between 1990 and 1996, Medicare spending on agencies and CORFs rose 23 percent and 35 percent per year, respectively, while spending on these services in hospitals grew 10 percent. By 1996, rehabilitation agencies accounted for 55 percent of Medicare's outpatient therapy spending, while hospitals and CORFs accounted for 34 percent and 12 percent, respectively.

While rehabilitation agencies collected the largest share of Medicare payments for these services, most beneficiaries undergoing outpatient therapy received their care in hospital outpatient departments. In 1996, two-thirds of outpatient therapy users sought care in that setting, while less than 30 percent used rehabilitation agencies. CORFs treated fewer than 5 percent of outpatient therapy patients.

**Chart 4-22. Rehabilitation Agencies and Comprehensive Outpatient Rehabilitation Facilities, by Region, 1997**

HCFA Region	Rehabilitation Agencies		Comprehensive Outpatient Rehabilitation Facilities	
	Number	Share	Number	Share
All	2,770	100.0%	523	100.0%
Boston	91	3.9	17	3.3
New York	134	4.8	20	3.8
Philadelphia	350	12.6	67	12.8
Atlanta	737	26.6	277	53.0
Chicago	532	19.2	44	8.4
Dallas	331	11.9	40	7.6
Kansas City	153	5.5	22	4.2
Denver	85	3.1	12	2.3
San Francisco	264	9.5	20	3.8
Seattle	93	3.4	4	0.8

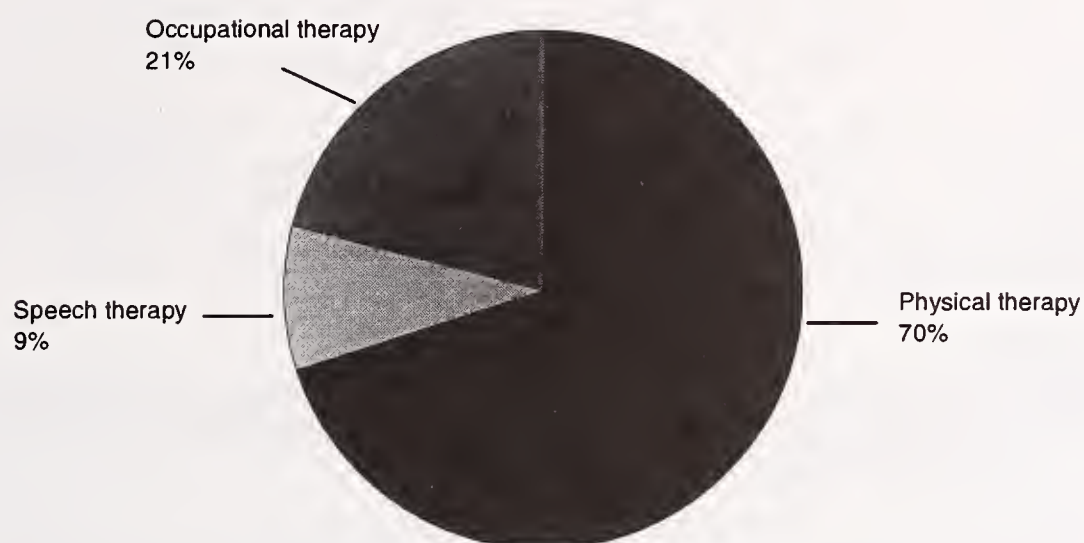
NOTE: Data are as of December.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Health Care Financing Administration Online Survey and Certification Reporting System.

Rehabilitation agencies and CORFs both provide physical, occupational, and speech therapy, but CORFs may furnish a broader array of services, including physician and skilled nursing services, respiratory therapy, social and psychological services, drugs and biologicals, and medical devices, supplies, and equipment. Unlike services provided by rehabilitation agencies, all CORF services must be performed by or under the supervision of a physician.

While rehabilitation agencies exist throughout the country, more than 25 percent are located in the Health Care Financing Administration's (HCFA) Atlanta region, which encompasses eight southeastern states. Another 20 percent are in the Chicago region, which comprises six states in the upper Midwest. CORFs are also highly concentrated in HCFA's Atlanta region, particularly in Florida, with more than one-third of all CORFs located in that state.

**Chart 4-23. Distribution of Medicare Spending for Outpatient Rehabilitation, by Type of Therapy, 1996**



NOTE: Percentages are based on interim program payments for outpatient therapy in hospitals, rehabilitation agencies, and CORFs.

SOURCE: Medicare Payment Advisory Commission analysis of the 5 percent outpatient claims file.

Rehabilitation therapies benefit patients with both motor and cognitive limitations. The goal of physical therapy is to increase patients' strength, endurance and walking ability, so as to help them function and move independently. Occupational therapy fosters independent living skills by improving patients' abilities to participate in work, leisure or social activities, and self-care. Speech pathology helps patients with limitations in communication and swallowing.

In 1996, physical therapy accounted for approximately 70 percent of Medicare's outpatient therapy payments to hospital outpatient departments, rehabilitation agencies, and CORFs. Occupational therapy and speech pathology made up 21 percent and 9 percent of these payments, respectively.



**Chart 4-24. Characteristics of Outpatient Therapy Users, 1996**

Characteristic	Users
Women	65.8%
Men	34.2
Age	
<65	13.0
65-74	36.8
75-84	33.1
85+	17.1
Medicare status	
Aged	88.1
Disabled	11.3
End-stage renal disease	0.6
Medicaid status	
Medicare only	77.0
Medicare and Medicaid	23.0

SOURCE: Medicare Payment Advisory Commission analysis of data from the denominator and 5 percent outpatient claims files.

Compared with the Medicare population overall, a high share of outpatient rehabilitation patients in 1996 were 85 years or older. Seventeen percent of patients were in that age group, compared with 10 percent of the Medicare population. Two-thirds of outpatient rehabilitation patients were women, compared with 57 percent of the Medicare population. Beneficiaries enrolled in both Medicare and Medicaid accounted for 23 percent of outpatient rehabilitation users, compared with 16 percent of the Medicare population.

**Chart 4-25. Outpatient Therapy Payments Per User, by Type of Provider and Control, 1996**

Type of Provider	Total	Private		Government
		Proprietary	Voluntary	
Hospital outpatient department				
Acute care hospital	\$281	\$260	\$274	\$305
Rehabilitation hospital	666	588	753	684
Rehabilitation agency	1,245	1,244	777	933
Comprehensive Outpatient Rehabilitation Facility	1,755	1,988	1,217	632

NOTE: Payments are Medicare interim payments.

SOURCE: Medicare Payment Advisory Commission analysis of the 5 percent outpatient claims and Provider of Service files from the Health Care Financing Administration.

Outpatient rehabilitation payments vary significantly by type of provider and control. In 1996, average payments per patient ranged from a high of \$1,755 in CORFs to a low of \$281 in the outpatient departments of acute care hospitals. Among rehabilitation agencies and CORFs, private, for-profit facilities received relatively high payments. By contrast, non-profit facilities received larger payments among the hospital outpatient providers.

**Chart 4-26. Medicare Hospice Payments, 1991-1996**

Year	Total Payments (In Millions)	Payments Per User
1991	\$ 533	\$4,365
1992	1,095	5,304
1993	1,243	5,779
1994	1,614	6,069
1995	1,873	6,056
1996	1,999	6,120
Average Annual Change	30.3%	7.0%

SOURCE: Health Care Financing Administration, Office of the Actuary.

Hospice care is a treatment approach that recognizes that the impending death of a individual may oblige a change from curative to palliative care. Hospice services help patients through the end stage of their terminal illnesses, and provide pain management and medical social services in patients' normal residences or a hospice facility. Medicare covers hospice care for beneficiaries who elect the benefit, and are certified by hospice staff and an attending physician as terminally ill with less than six months estimated to live. A beneficiary who opts for hospice care is no longer eligible for curative services under the Medicare program for illness related to the terminal condition.

Medicare finances about two-thirds of all spending for hospice care. Since 1991, the program's hospice payments rose 30 percent per year, on average, to \$2 billion by 1996. In that year, though, spending increased by only 7 percent. The slowed spending may be due in part to a lower rate of patient enrollment, after the Office of Inspector General found that some hospices were inappropriately enrolling patients by making inaccurate life expectancy determinations. Between 1991 and 1996, Medicare's payments per hospice user grew much more slowly than total payments.



**MEDICARE AMBULATORY CARE**

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Ambulatory care encompasses a wide range of medical services and procedures currently provided in an equally wide variety of clinical settings. They are characterized as a set of acute services that do not require an inpatient admission to a hospital or post-acute setting—as the term “ambulatory care” implies, the patient generally is able to walk in and walk out on the same day. Ambulatory services range from clinical laboratory services, medical visits provided in a physicians’ office, diagnostic “scope” procedures performed in ambulatory surgical centers, emergency procedures done in hospital outpatient departments, and even influenza vaccines administered in shopping malls.

As in the rest of the nation’s health care system, ambulatory care has become increasingly important within Medicare’s array of benefits. Several factors, including financial pressures and advances in medical technology have contributed to double-digit increases in Medicare expenditures for these services since the early 1980s. Ambulatory care as a share of total Medicare spending has also increased during this time.

The pressures facing Medicare’s ambulatory care infrastructure resulted in a series of reforms enacted in the Balanced Budget Act of 1997 that significantly change many facets of these benefits. This chapter provides background information on several of the major components of the Medicare program that together compose the ambulatory care benefit.

**Chart 5-1. Medicare Spending for Ambulatory Care Services, by Type of Setting, 1996**

Type of Setting	Number	Payments <sup>a</sup> (In Billions)	Percent of Total Ambulatory Care Spending
Hospital outpatient department	5,188	\$15.0	54.9%
Physicians	787,000 <sup>b</sup>	11.1	40.7
Office		8.7	31.9
Hospital outpatient department		2.0	7.3
Ambulatory surgical center		0.4	1.5
Ambulatory surgical center	2,264	0.9	3.3
Rural health clinics	3,209	0.2	0.7
Federally qualified health center	1,710	0.1	0.4
Total	—	27.3	100.0

NOTE: Hospital payments are fiscal year, all others are calendar year.

<sup>a</sup> Physician payments do not include professional fees.

<sup>b</sup> Count includes doctors of osteopathic medicine, chiropractors, psychologists, podiatrists, and other limited-license practitioners.

SOURCE: Medicare Payment Advisory Commission analysis of data from the Physician/Supplier 5 percent sample Standard Analytical file, the Health Care Financing Administration Online Survey and Certification Reporting System and Center for Health Plans and Providers, and the Congressional Budget Office.

Ambulatory care encompasses a wide variety of medical services, including minor surgeries, radiology and other diagnostic procedures such as ultrasound examinations, electrocardiograms, and pulmonary tests, clinic services (evaluation and management services), laboratory tests and vaccinations, among others. They are distinct from more intensive services in that they do not require an admission to a hospital or other medical facility in order to provide them. Many ambulatory care services can be provided in a number of different settings, such as hospital outpatient departments, physicians' offices, ambulatory surgical centers, or other facilities.

Medicare payments for ambulatory care generally consist of two parts, a payment to the physician or other practitioner for professional services, and a payment to the facility that reflects the cost of goods and other ancillary services intrinsic to the major service. Under the Medicare Fee Schedule for physicians' services, the "facility" payment is made through the practice expense component of the fee schedule amount, which is intended to recognize the costs of operating an office-based practice. However, the practice expense payment is also made, albeit often at a reduced rate, when physicians provide services outside the office setting. Rural health clinics (RHCs) and federally qualified health centers (FQHCs) are paid an all-inclusive rate that reflects both the professional and facility payments.

Currently, hospital outpatient departments account for the majority of Medicare facility payments for ambulatory care, at 55 percent of the total. Total practice expense payments to physicians for services provided in ambulatory settings are second, accounting for nearly 41 percent of Medicare expenditures for ambulatory care. Payments to other facilities, such as ambulatory surgical centers (ASCs), RHCs, and FQHCs, account for less than 5 percent of the total, but are directed to highly delineated areas of the country.

**Chart 5-2. Number of Federally Qualified Health Centers and Medicare Payments, 1993-1997**

Year	Number of Federally Qualified Health Centers	Payments (In Millions)
1993	1,202	\$ 44
1994	1,416	69
1995	1,573	86
1996	1,710	110
1997	1,787	123

SOURCE: Health Care Financing Administration, Office of the Actuary, and Online Survey and Certification Reporting System.

Federally qualified health centers (FQHCs) were originally authorized under the Medicaid provisions of the Omnibus Budget and Reconciliation Act of 1989. These facilities were established to provide medical services to particularly vulnerable populations such as migrant workers, residents of public housing, and the homeless. The range of services that FQHCs provide is comparable to that provided in the physicians' office setting, as well as certain non-physician and social services.

Legislation in 1990 authorized Medicare to make payments to these facilities for services they provided to program beneficiaries. Prior to the passage of the Balanced Budget Act of 1997 (BBA), provider-based FQHCs were paid based on their costs, and beneficiaries were not subject to a deductible when calculating their coinsurance for FQHC services. Free-standing, or independent FQHCs are also paid on a cost basis, but subject to one of two fixed, all-inclusive per-visit limits (depending on whether they are located in urban or rural areas) that are updated annually by the Medicare Economic Index (MEI). The BBA applied these limits to provider-based facilities as well.

Since 1993, the number of FQHCs that provide services to Medicare beneficiaries has increased at over 10 percent per year, to nearly 1,800 by the end of 1997. During this period, spending for FQHC services increased by nearly 30 percent annually. Even so, payments to FQHCs account for a very small share of Medicare's total spending for ambulatory care.



**Chart 5-3. Number of Rural Health Clinics and Medicare Payments, 1993-1997**

Year	Number of Rural Health Clinics	Payments (In Millions)
1993	1,322	\$ 56
1994	1,989	78
1995	2,642	125
1996	3,209	182
1997	3,538	220

SOURCE: Health Care Financing Administration, Office of the Actuary, and Online Survey and Certification Reporting System.

As with the FQHC benefit, Medicare coverage of services provided in rural health clinics (RHCs) was designed to achieve specific policy goals by targeting particular medically underserved populations. The original intent of the Rural Health Clinics Act (RHCA) was to expand access to care for beneficiaries living in rural areas designated as medically underserved by the Public Health Service or the governor of the state in which the RHC was located. Like FQHCs, rural health clinics provide a core set of basic clinical and social work services.

For the first several years of the program, the number of RHCs grew slowly. After legislative changes to RHC payment policy in 1989 and 1990, however, the number of facilities, and corresponding Medicare expenditures, grew rapidly—the number of RHCs increased by nearly 30 percent annually between 1993 and 1997, while expenditures increased over 40 percent per year during this period.

**Chart 5-4. Number of Medicare-Certified Ambulatory Surgical Centers and Medicare Payments, 1993-1997**

Year	Number of Ambulatory Surgical Centers	Payments (In Millions)*
1993	1,715	\$ 625.0
1994	1,894	721.3
1995	2,072	836.3
1996	2,264	867.6
1997	2,470	900.0

\* Includes both program payments and beneficiary coinsurance payments.

SOURCE: Health Care Financing Administration, Office of the Actuary, and Online Survey and Certification Reporting System.

Medicare makes payments for certain surgical services provided to its beneficiaries in ambulatory surgical centers (ASCs). The intent of the ASC benefit was to achieve program savings by recognizing that these services could be provided less expensively than on an inpatient basis, without allowing ASCs to substitute for even less costly physician office services.

Since the inception of the ASC benefit, both the number of ASCs and the number of services they provide has grown rapidly, from just over 400 facilities in 1983, to nearly 2,500 facilities providing 1.5 million services in 1997. However, the distribution of ASCs across the country is limited, with over 90 percent of them located in urban areas. Further, half of the nation's ASCs are located in only six states—California, Florida, Maryland, Texas, Arizona, and Washington.

**Chart 5-5. Twenty Highest-Volume Ambulatory Surgical Center Procedures and Aggregate Payments, 1996**

HCPCS Code	Description of Service	Volume	Percent of Volume	Cumulative Percent of Volume	Total Payments (In Millions)	Percent of Payments	Cumulative Percent of Payments
66984	Remove cataract, insert lens	525,940	34.5%	34.5%	\$469.0	55.1%	55.1%
66821	After cataract laser surgery	174,160	11.4	45.9	69.1	8.1	63.2
43239	Upper GI endoscopy, biopsy	90,960	6.0	51.8	33.5	3.9	67.2
45378	Diagnostic colonoscopy	70,140	4.6	56.4	27.5	3.2	70.4
45385	Colonoscopy, lesion removal	45,540	3.0	59.4	17.9	2.1	72.5
45380	Colonoscopy and biopsy	39,760	2.6	62.0	14.9	1.8	74.3
62289	Injection into spinal canal	39,820	2.6	64.6	11.8	1.4	75.7
45384	Colonoscopy	26,500	1.7	66.3	9.9	1.2	76.8
43235	Upper GI endoscopy, diagnostic	29,300	1.9	68.3	7.5	0.9	77.7
67904	Follow-up surgery of eye	13,160	0.9	69.1	6.8	0.8	78.5
52000	Cystoscopy	23,600	1.6	70.7	6.7	0.8	79.3
62278	Inject spinal anesthetic	19,800	1.3	72.0	5.8	0.7	80.0
66170	Glaucoma surgery	13,060	0.9	72.8	5.0	0.6	80.6
28285	Repair of hammertoe	13,380	0.9	73.7	4.8	0.6	81.1
64721	Carpal tunnel surgery	11,080	0.7	74.4	4.2	0.5	81.6
49505	Repair inguinal hernia	7,140	0.5	74.9	4.1	0.5	82.1
29881	Knee arthroscopy/surgery	7,360	0.5	75.4	4.1	0.5	82.6
55700	Biopsy of prostate	9,400	0.6	76.0	3.7	0.4	83.0
43248	Upper GI endoscopy/guide wire	8,560	0.6	76.6	3.1	0.4	83.4
19120	Removal of breast lesion	5,800	0.4	76.9	2.7	0.3	83.7
	All other ASC procedures	352,220	23.1	100.0	138.9	16.3	100.0
Total		1,526,680	100.0		850.8	100.0	

NOTE: Volume and payment estimates derived by inflating data in 5 percent sample file to 100 percent. Current Procedural Terminology codes and descriptions copyrighted by the American Medical Association. HCPCS = HCFA Common Procedure Coding System. GI = Gastro-intestinal. ASC = Ambulatory Surgical Center.

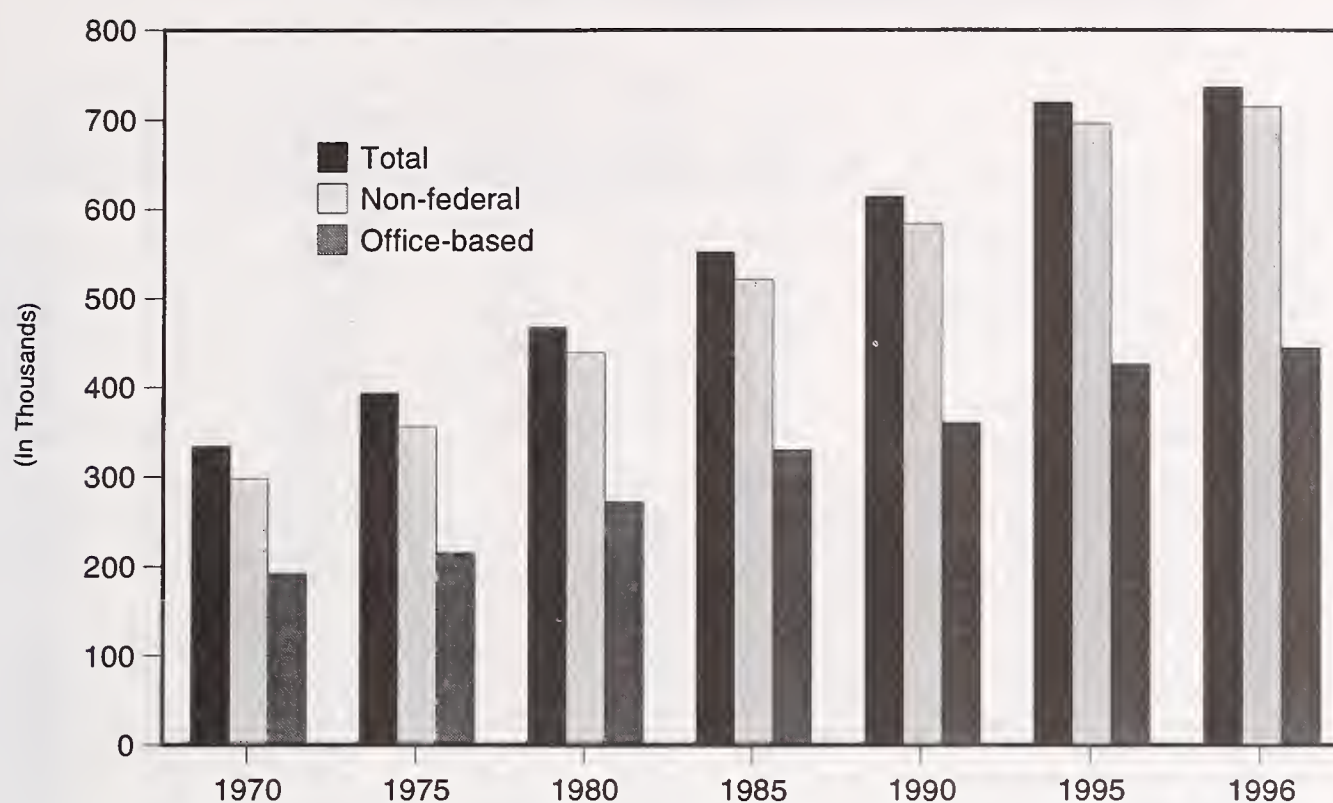
SOURCE: Medicare Payment Advisory Commission analysis of Physician/Supplier 5 percent sample Standard Analytical File from the Health Care Financing Administration.

Medicare limits the services that ASCs can provide to surgical procedures that are predominantly performed on an inpatient basis, but that can be safely performed in outpatient settings, and which are not frequently provided in physicians' offices. These services are paid one of eight prospectively-determined amounts. The Health Care Financing Administration (HCFA) has proposed to ease some of the requirements for ASC list eligibility in a recent Notice of Proposed Rulemaking (DHHS 1998).

ASCs can, in theory, provide any of the 2,300 discrete surgical services that currently make up the ASC list. In practice, however, the distribution of the services they provide is also tightly circumscribed, with the 20 highest-volume procedures accounting for roughly 80 percent of aggregate service volume and payments. Reflecting the composition of the ASC list itself, the highest volume procedures are predominantly ocular procedures, various "scope" procedures (colonoscopies, endoscopies, and arthroscopies), and injections. A single cataract procedure (HCPCS code 66984, cataract extraction with intraocular lens insertion) represents over 50 percent of total payments, and over a third of ASC volume.



**Chart 5-6. Practicing Physicians in the United States, 1970-1996**



SOURCE: American Medical Association, 1997.

Physicians' offices are also major sources of ambulatory care for Medicare beneficiaries. The number of physicians practicing in the United States has grown steadily since 1970, from about 332,000 in that year to over 700,000 in 1996. The overall annual growth rate of just over 3 percent during this time has produced a steady increase in the ratio of physicians to the population as a whole. Of those physicians practicing medicine in 1996, roughly 60 percent, or 450,000, were office-based, a slight increase over the 1970 percentage.

In 1996, nearly 80 percent of physicians (and other practitioners such as chiropractors, podiatrists, and doctors of osteopathic medicine) were enrolled in the Medicare program as participating physicians.

For more information on Medicare payment for physician services, see Chapter 6 of this report.

**Chart 5-7. Twenty Highest-Volume Medicare Services Provided in Physicians' Offices, 1996**

HCPSC Code	Description	Allowed Charges (In Millions)	Percent of Total Allowed Charges	Cumulative Percent of Total Allowed Charges	Number of Services (In Thousands)	Percent of Total Services	Cumulative Percent of Total Services
99213	Office/OPD visit, established patient	\$ 2,723.8	14.2%	14.2%	81,564	14.7%	14.7%
G0001	Routine venipuncture	99.0	0.5	14.7	33,009	6.0	20.7
99214	Office/OPD visit, established patient	1,702.3	8.9	23.6	32,650	5.9	26.6
99212	Office/OPD visit, established patient	650.3	3.4	27.0	27,909	5.0	31.7
A2000	Chiropractic service	293.2	1.5	28.5	12,186	2.2	33.9
81000	Dipstick urinalysis	46.3	0.2	28.7	10,612	1.9	35.8
90724	Influenza virus vaccine, injection	43.1	0.2	28.9	9,858	1.8	37.6
93000	12 lead electrocardiogram	276.3	1.4	30.3	9,842	1.8	39.4
G0008	Influenza virus vaccine, administration	31.6	0.2	30.5	8,728	1.6	40.9
99211	Office/OPD visit, established patient	106.5	0.6	31.1	8,141	1.5	42.4
J2405	Ondansetronhydrochloride	46.6	0.2	31.4	7,83	1.4	43.8
99215	Office/OPD visit, established patient	584.7	3.1	34.4	7,163	1.3	45.1
92014	Ophthalmological service, established patient	384.5	2.0	36.4	7,018	1.3	46.4
85024	Hemogram and platelet count	79.3	0.4	36.8	6,987	1.3	47.6
95165	Allergen immunotherapy	32.5	0.2	37.0	6,473	1.2	48.8
92012	Ophthalmological service, new patient	263.5	1.4	38.4	6,063	1.1	49.9
71020	Chest X-ray, two views	165.9	0.9	39.3	5,524	1.0	50.9
17002	Destruction of lesions, each over three	58.1	0.3	39.6	4,930	0.9	51.8
Q0136	Injection, epoetin	57.9	0.3	39.9	4,829	0.9	52.7
85610	Prothrombin time	22.2	0.1	40.0	4,10	0.7	53.4
All other services		11,480.0	60.0	100.0	257,613	46.6	100.0
Total		19,147.6	100.0			100.0	

NOTE: Numbers may not add due to rounding. Current Procedural Terminology codes and descriptions copyrighted by the American Medical Association. HCPSC = HCFA Common Procedure Coding System. OPD = hospital outpatient department.

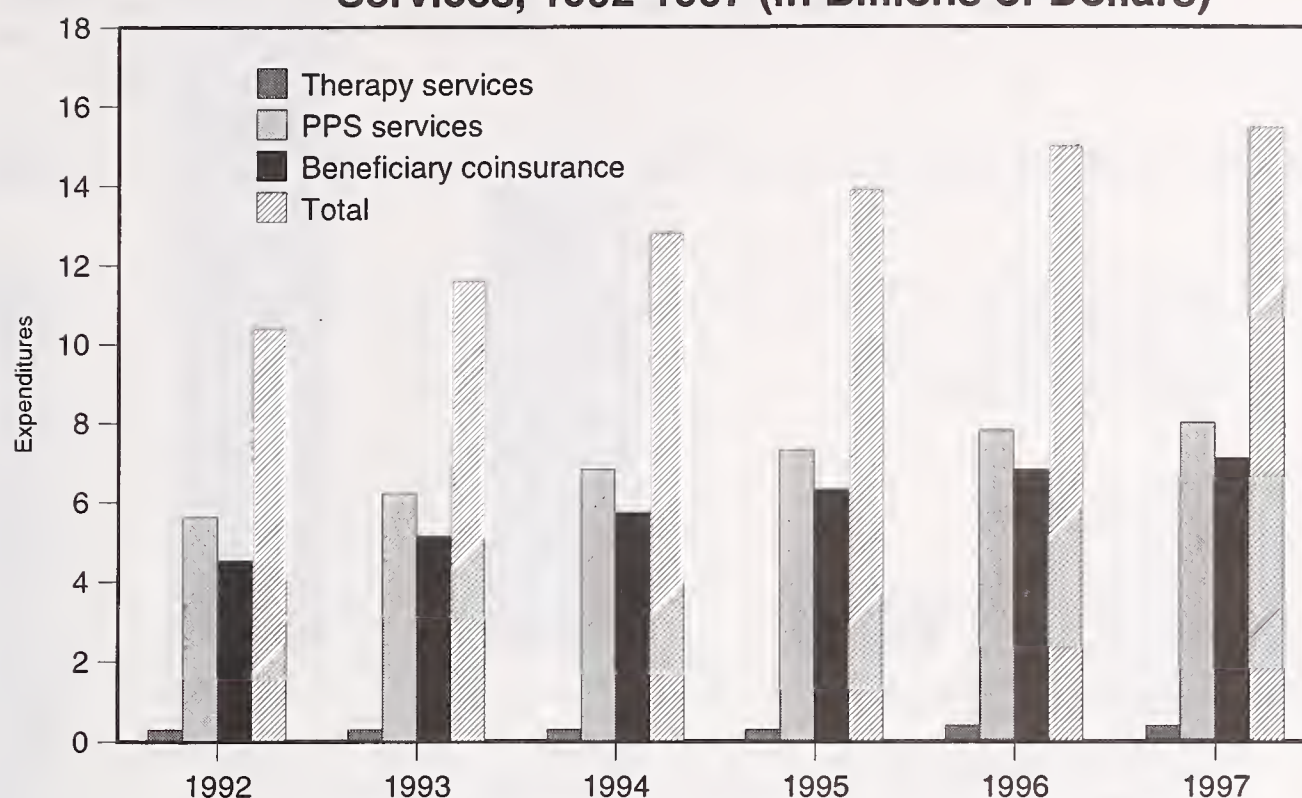
SOURCE: Medicare Payment Advisory Commission analysis of Physician/Supplier 5 percent sample Standard Analytical File from the Health Care Financing Administration.

The highest volume ambulatory care services provided in the physicians' office setting (excluding clinical laboratory services) are, not surprisingly, office visits. These are generally evaluation and management services that vary with diagnosis, length of time of the visit, and whether it is for a new or established patient. Including chiropractic and ophthalmological services, these visits composed a third of total Medicare allowed charges and volume in the office setting in 1996. The majority of the remaining top twenty services are injections and simple diagnostic tests such as electrocardiograms and chest X-rays.

See Chapter 6 for more detailed information on services provided in physicians' offices.



**Chart 5-8. Medicare Expenditures for Hospital Outpatient Services, 1992-1997 (In Billions of Dollars)**



SOURCE: Congressional Budget Office analysis of Medicare Cost Report data from the Health Care Financing Administration.

After the inception of Medicare's prospective payment system for hospital inpatient services, expenditures for outpatient services grew rapidly, at a rate upwards of 13 percent annually through the early 1990s. There are two main causes of the growth of Medicare spending for hospital outpatient services. First, advances in medical technology have permitted, and indeed encouraged, the migration of services from more intensive inpatient settings to less intensive venues. For example, in the early 1980s almost all cataract surgeries for Medicare beneficiaries were performed on an inpatient basis; ten years later, cataract operations are almost exclusively outpatient procedures. The movement to provide services in less intensive settings also increased the pool of beneficiaries who could avail themselves of a given procedure.

Impetus for increased Medicare spending for hospital outpatient services also came from its own payment policies, particularly the interplay between the inpatient PPS and the various payment systems for outpatient services. Inpatient PPS provided hospitals with a strong incentive to shift services to settings where payments were less constrained. Even after the imposition of certain cost saving measures on outpatient payment in the early 1990s, Medicare's payment methods for these services retained much of its cost-based structure, through which the higher a hospital's outpatient costs, the higher its Medicare reimbursement.

The growth in Medicare spending for hospital outpatient services has slowed in recent years, and will likely be reduced even more by specific provisions of the BBA.



**Chart 5-9. Relative Provision for Highest-Volume Hospital Outpatient Services, by Hospital Payment Method and Setting, 1996**

			Percent Provided in:		
Hospital Payment Method/ HCPCs Code	Description of Service	Total Volume (In Thousands)	Outpatient Departments	Ambulatory Surgical Centers	Physician Offices
ASC surgery					
43239	Upper gastro-intestinal endoscopy, with biopsy	602	77.1%	15.1%	7.8%
45378	Diagnostic colonoscopy	532	78.1	13.2	8.7
45380	Colonoscopy with biopsy	251	77.5	15.8	6.7
45385	Colonoscopy with lesion removal	260	74.1	17.5	8.4
66984	Extract cataract, insert lens	1,544	62.2	34.1	3.7
Radiology					
71010	Chest X-ray, one view	2,330	66.7	-	33.3
71020	Chest X-ray, two views	11,016	49.9	-	50.1
73510	X-ray of hip	1,561	37.0	-	63.0
70450	CT Scan of brain/head	710	86.4	-	13.6
76091	Mammography, both breasts	2,115	49.9	-	50.1
Diagnostic					
9300/05/10	12 lead electrocardiogram	16,233	32.2	-	67.7
9315/16/17	Cardiovascular stress test	1,812	37.6	-	62.4
93307	Echo-heart	1,974	31.7	-	68.3
93880	Duplex scan of extracranial arteries	1,284	47.8	-	52.2
94760	Blood oxygen level (oxymetry)	2,305	55.6	-	44.4
Cost-based					
99201	Office or OPD visit, new patient	7,342	90.7	-	9.3
99213	Office or OPD visit, established patient	83,595	2.5	-	97.5
99281	Emergency visit	1,246	100.0	-	0.0
99282	Emergency visit	1,846	100.0	-	0.0
99283	Emergency visit	2,226	100.0	-	0.0

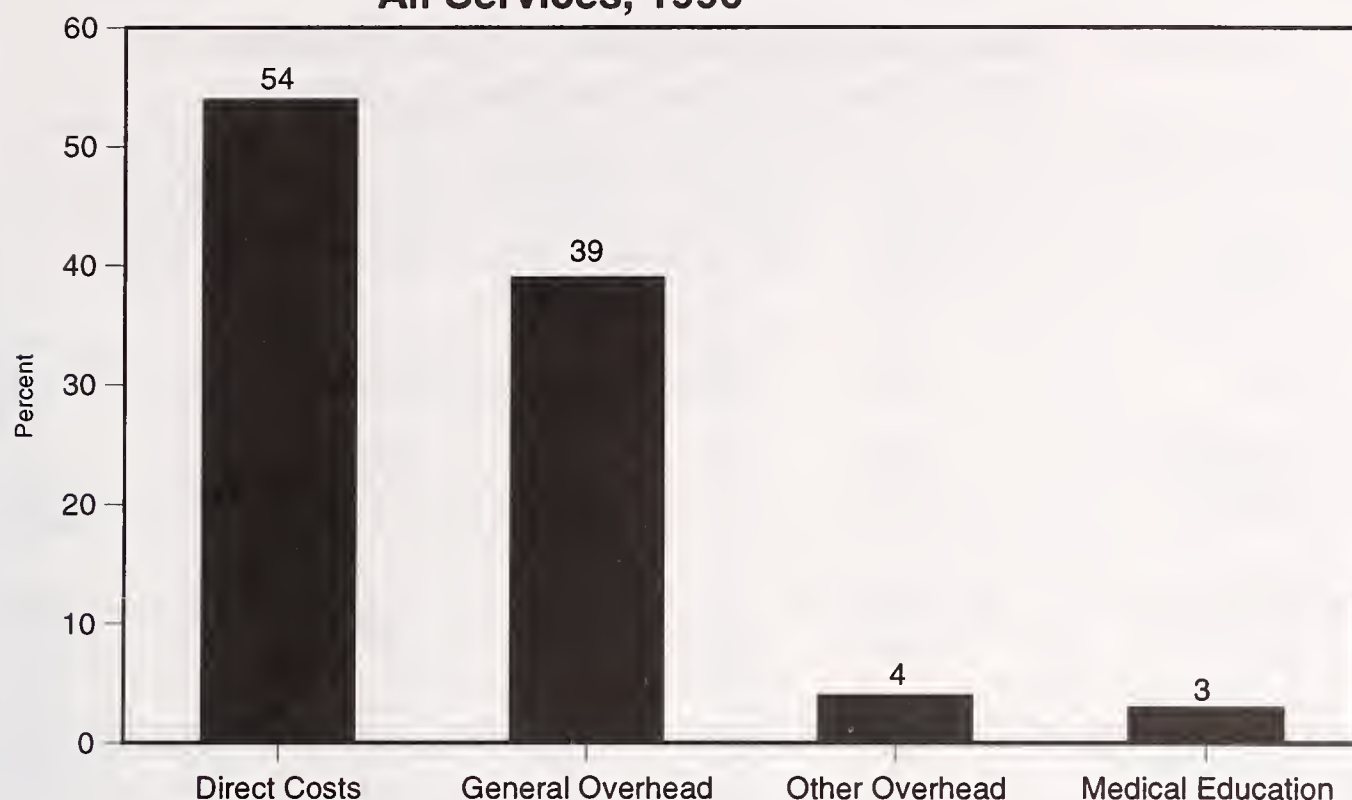
NOTE: Volume estimates are inflated from figures in 5 percent sample file. ASC = ambulatory surgical center. HCPCS = HCFA Common Procedure Coding System. Current Procedural Terminology codes and descriptions copyrighted by the American Medical Association.

SOURCE: Medicare Payment Advisory Commission analysis of HCFA 5 percent Sample Hospital Outpatient and Physician/Supplier Standard Analytical Files, 1996.

In terms of Medicare volume, outpatient evaluation and management visits and emergency services make up the majority of the highest volume non-laboratory services provided in hospital outpatient departments. As in the physicians' office setting, the remainder of the top volume services are predominantly low-intensity diagnostic services. The twenty highest volume services provided in hospital outpatient departments make up nearly 50 percent of total Medicare utilization in this setting.

While ambulatory care services are thought to be largely interchangeable across settings, the distribution of the highest volume services in each of the three major ambulatory care venues suggests that financial incentives may not be paramount in the determination of where these services are provided, but rather, that clinical appropriateness in conjunction with explicit coverage policies may play a larger role.

**Chart 5-10. Components of Hospital Outpatient Costs,  
All Services, 1996**



SOURCE: Medicare Payment Advisory Commission analysis of hospital outpatient claims and cost report data from the Health Care Financing Administration.

Before the BBA, Medicare's payment mechanisms for ambulatory care services were largely cost-based. Even under the BBA's overhaul of these payment systems, the relative weights under the hospital outpatient PPS are based on median hospital costs. Similarly, HCFA's proposal to modify the payment system for ASC services uses facility costs to set relative weights.

Partly due to the past reliance on costs, Medicare pays different amounts for the same ambulatory care service depending on the setting (see MedPAC 1998b). In general, payments to hospitals for ambulatory services are higher than those in other ambulatory settings. To the extent that higher hospital payments reflect costs, these increased payments may reflect higher hospital costs related to standby capacity, staffing mix, licensing and regulatory requirements, local market characteristics, or the characteristics of the Medicare population that uses the hospital outpatient department as their source of ambulatory care.

MedPAC staff examined hospitals' Medicare Cost Reports for ambulatory care services. This analysis identified direct costs (those related to performing procedures), general overhead costs that would be incurred by any ambulatory facility (such as buildings and equipment, employee benefits, and laundry service), overhead costs that would likely only be borne by hospitals (such as cafeteria, dietary, social services, and so forth), and costs related to medical education.

Direct costs account for a little over half of total costs for hospital outpatient services. In the aggregate, 93 percent of hospital costs for outpatient services are attributable to costs that ASCs and physicians' offices also incur, albeit not necessarily on the same scale. Seven percent of hospitals' outpatient costs are unique to hospitals.

**Chart 5-11. Components of Hospital Outpatient Costs for All Services, by Hospital Group, 1996**

Hospital Group	Number of Hospitals	Direct Costs/ Total Costs	Direct and General Overhead/ Total Costs	Direct and All Overhead/ Total Costs	Medical Education Costs/ Total Costs
All hospitals	5,100	0.54	0.93	0.97	0.03
Rural	2,166	0.55	0.96	1.00	0.00
Urban	2,934	0.54	0.93	0.97	0.03
Major teaching	235	0.53	0.84	0.89	0.11
Other teaching	792	0.55	0.93	0.97	0.03
Non-teaching	4,073	0.54	0.96	1.00	0.00
DSH:					
Rural DSH	463	0.56	0.95	1.00	0.00
Urban DSH	1,346	0.54	0.92	0.96	0.04
Non-DSH	2,930	0.54	0.95	0.99	0.01
Urban <100 beds	784	0.51	0.95	0.99	0.01
Urban 100-199 beds	917	0.53	0.95	0.99	0.01
Urban 200-299 beds	588	0.54	0.94	0.98	0.02
Urban 300-399 beds	313	0.56	0.93	0.97	0.03
Urban 400-499 beds	159	0.54	0.91	0.95	0.05
Urban 500+ beds	172	0.54	0.89	0.93	0.07
Rural <50 beds	1,098	0.55	0.97	1.00	0.00
Rural 50 -99 beds	649	0.55	0.96	1.00	0.00
Rural 100-149 beds	225	0.54	0.95	1.00	0.00
Rural 150-199 beds	108	0.55	0.95	1.00	0.00
Rural 200+ beds	87	0.55	0.95	0.99	0.01
10th volume percentile	513	0.42	0.97	1.00	0.00
90th volume percentile	511	0.55	0.91	0.95	0.05
Cancer hospitals	7	0.46	0.88	0.96	0.04

NOTE: DSH = disproportionate share.

SOURCE: Medicare Payment Advisory Commission analysis of hospital outpatient claims and cost report data from the Health Care Financing Administration.

There is remarkably little variation in the relationship between direct and total costs across hospital types, although this ratio does seem to be positively correlated with service volume. Low volume hospitals and cancer hospitals have a low proportion of direct costs relative to overall outpatient costs. Eleven percent of outpatient service costs at major teaching hospitals are directly attributable to teaching activity (costs related to interns and residents, nursing schools, and so on).



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## TRENDS IN MEDICARE PHYSICIAN PAYMENT

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Payments to physicians for services provided to Medicare beneficiaries are made in accordance with the Medicare Fee Schedule. Introduced in 1992, the fee schedule bases payments on the resources used to provide specific services. For purposes of the fee schedule, those resources fall into three categories: physician work, practice expenses, and malpractice insurance expenses. The fee schedule's relative value units (RVU) are measures of these resources. RVUs are translated into dollars by a conversion factor.

Fee schedule payments were phased in over a five-year period ending in 1996. During this transition, payments were a blend of fee schedule payment rates and average charges under the customary, prevailing, and reasonable payment method which the fee schedule replaced.

The move from charge-based to resource-based physician payments was expected to have several effects on physician payments. First, payment rates for evaluation and management (EM) services, consisting primarily of office visits, were expected to increase relative to rates for procedures and surgical services. Second, a shift in payments from urban areas to rural areas was anticipated. Third, payments to primary care physicians were expected to go up relative to other specialties.

Policy changes implemented during the transition dampened the fee schedule's expected effects. Most importantly, the Volume Performance Standard (VPS) system for updating the conversion factor permitted three different conversion factors, depending on the type of service (surgical, primary care, and other nonsurgical), and varying annual updates for each. A result was growing disparities among the three conversion factors that diminished the resource-based nature of the fee schedule.

The Balanced Budget Act of 1997 (BBA) corrected this flaw in Medicare's physician payments. It required implementation of a single conversion factor for all services in 1998. The BBA also replaced the VPS system with a sustainable growth rate system which includes one annual conversion factor update applicable to all services.

This chapter reviews trends in Medicare's physician payment rates from 1991, the year before introduction of the fee schedule, to 1996. To show the effects of policy changes since full implementation of the fee schedule, changes in payment rates from 1996 to 1997 are also presented. Changes in payment rates are shown by type of service, geographic area, and physician specialty. Changes in beneficiary use of services by type of service are also reviewed.

**Chart 6-1. Changes in Medicare Fee Schedule Payments, by Type of Service, 1991-1997**

Type of Service	Annual Percentage Change in Payment Per Service	
	1991-1996	1996-1997
All services	0.4%	-0.1%
Evaluation and management		
Primary care	5.4	4.8
Other	4.7	2.8
Surgical	-1.7	-2.7
Other nonsurgical	-2.0	-2.5

NOTE: Data are for the first six months of each year.

SOURCE: Medicare Payment Advisory Commission analysis of 1991-1997 claims, 5 percent sample of beneficiaries.

During the transition to fee schedule payments, payment rates for EM services increased while rates for other broad categories of services fell. Payment rates for primary care services went up the most. They increased by an average of 5.4 percent per year from 1991 to 1996. Payment rates for other EM services grew by 4.7 percent during the same period. Payments rates for surgical services and nonsurgical services other than EM decreased annually by an average of 1.7 percent and 2.0 percent, respectively, from 1991 to 1996.

Trends in payment rate changes continued in 1997. From 1996 to 1997, payment rates for primary care services increased by 4.8 percent, and rates for other EM services increased by 2.8 percent. Payment rates for surgical services and other nonsurgical services fell 2.7 percent and 2.5 percent, respectively.



**Chart 6-2. Changes in Medicare Fee Schedule Payments,  
by Type of Geographic Area, 1991-1997**

Type of Geographic Area/ Size of Population	Annual Percentage Change in Payment Per Service	
	1991-1996	1996-1997
All	0.4%	-0.1%
Metropolitan areas		
Greater than 1 million	0.2	0.0
Less than 1 million	0.2	-0.5
Rural counties		
Greater than 25,000	1.7	0.6
Less than 25,000	4.3	2.3

NOTE: Data are for the first six months of each year.

SOURCE: Medicare Payment Advisory Commission analysis of 1991-1997 claims, 5 percent sample of beneficiaries.

During the fee schedule transition, payment rates grew faster in rural areas than in metropolitan areas. In the smallest rural counties, with fewer than 25,000 residents, payment rates increased at an average rate of 4.3 percent per year from 1991 to 1996. Larger rural counties, each with a population of 25,000 or more, saw payment rates grow at a somewhat lower rate of 1.7 percent per year during the transition. In metropolitan areas, payment rates increased by an average of 0.2 percent per year.

The pattern of larger payment rate increases in rural areas continued in 1997. Payment rates increased by an average 2.3 percent in the smallest counties, and they increased by 0.6 percent in larger rural counties. Payment rates decreased on average by 0.5 percent in smaller metropolitan areas, and they remained unchanged in larger metropolitan areas.

**Chart 6-3. Changes in Medicare Fee Schedule Payments, by Specialty, 1991-1997**

Specialty	Annual Percentage Change in Payment Per Service	
	1991-1996	1996-1997
All	0.4%	-0.1%
Primary care		
Family/general practice	5.6	3.7
Internal medicine	2.5	2.8
Other medical		
Cardiology	-3.1	-0.7
Gastroenterology	-2.7	-1.8
Other medical	2.7	0.7
Surgical		
Dermatology	2.1	-1.7
General surgery	0.2	-0.8
Ophthalmology	-3.3	-3.5
Orthopedic surgery	0.0	-1.5
Thoracic surgery	-1.5	-2.1
Urology	2.2	0.7
Other surgical	0.8	-0.1
Other		
Pathology	-4.9	-5.3
Radiology	-2.7	-4.3
Other	1.1	-0.1

NOTE: Data are for the first six months of each year.

SOURCE: Medicare Payment Advisory Commission analysis of 1991-1997 claims, 5 percent sample of beneficiaries.

In general, specialties deriving relatively large shares of their Medicare revenues from EM services experienced increases in payments. Physicians in family and general practice saw their payment rates growing at an average rate of 5.6 percent per year from 1991 to 1996. Internists had increases in payment rates of 2.5 percent annually.

Specialties providing mostly surgical services and nonsurgical services other than EM usually found their payment rates falling during the transition. Payment rates for cardiologists, for example, dropped by an average of 3.1 percent per year from 1991 to 1996. Ophthalmologists saw their payment rates falling by 3.3 percent per year over the same period.

Trends characteristic of the transition to fee schedule payments generally continued in 1997.

**Chart 6-4. Effects of Policy Changes on Medicare Fee Schedule Payments, by Type of Service, 1996-1997**

Type of Service	Total Change in Payment Per Service	Change Due to	
		Conversion Factor Updates	Relative Value Unit Changes*
All services	-0.1%	-0.8%	0.7%
Evaluation and management			
Primary care	4.8	1.0	3.8
Other	2.8	-2.3	5.1
Surgical	-2.7	0.4	-3.1
Other nonsurgical	-2.5	-2.3	-0.2

NOTE: Data are for the first six months of each year.

\* Relative value unit changes, calculated as the difference between conversion factor and total changes, include very small changes in geographic adjustment factors.

SOURCE: Medicare Payment Advisory Commission analysis of 1996-1997 claims, 5 percent sample of beneficiaries.

Changes in physician payment rates during the transition to the fee schedule were influenced by a number of policy changes. Conversion factor updates, relative value unit (RVU) changes, changes in geographic adjustment factors, and the transition rules for phasing in the fee schedule all had measurable effects on payment rates (PPRC 1996, 1997).

After more than six years of experience with the fee schedule, policy changes are now limited primarily to annual updates to the fee schedule conversion factor and ongoing changes in RVUs.

Changes in payment rates for 1997 illustrate the effects of fee schedule policies. Conversion factor updates were positive (1.0 percent) for primary care and positive, but small (0.4 percent), for surgical services. The update for nonsurgical services other than primary care was -2.3 percent. RVU changes implemented in 1997 had larger effects on payment rates. Most of the RVU changes implemented in 1997 were due to a five-year review of work RVUs required by the Omnibus Budget Reconciliation Act of 1989. The review led to RVU increases for EM services and decreases, on average, for surgical services and nonsurgical services other than EM.



**Chart 6-5. Change in Payment and Use Per Beneficiary for Selected Services, 1991-1997**

Type of Service	Annual Percentage Change						Percentage of 1997 Physician Services Outlays
	1991-1996			1996-1997			
	Payment Per Service	Volume <sup>a</sup>	Count of Services <sup>b</sup>	Payment Per Service	Volume <sup>a</sup>	Count of Services <sup>b</sup>	
All Services	0.6%	3.7%	2.6%	-0.1%	2.7%	-1.1%	100.0%
Primary care services	5.6	3.7	3.0	5.2	4.2	3.5	24.3
Other evaluation and management services	4.8	4.1	1.3	3.0	3.0	1.7	18.8
Surgical services <sup>c</sup>	-1.7	3.1	6.4	-2.9	2.9	-9.0	21.1
Other nonsurgical services	-2.2	3.7	2.4	-3.4	1.4	-2.8	35.8

NOTE: Data are for the first six months of each year. Partial services (for example, surgical services limited to post-operative care only) are excluded.

<sup>a</sup> Measures change in outlays if prices were frozen (number and intensity of services).

<sup>b</sup> Measures change in the number of services only.

<sup>c</sup> The sharp drop in the count of surgical services from 1996 to 1997 was due to a change in the reporting of a nail procedure (debridement) frequently used by beneficiaries.

SOURCE: Medicare Payment Advisory Commission analysis of 1991-1997 Medicare claims, 5 percent sample of beneficiaries.

Growth in beneficiary use of services remained low in 1997. The average growth rate of 2.7 percent for all services represents continuation of a trend that began in the early 1990s. Since 1992, the rate of growth in beneficiary use of services has been 5 percent or less every year. Historically, growth in service use has been more volatile. During the decade prior to 1992, annual growth in service use ranged from a low of 3.7 percent to a high of 10.0 percent. It was low for two consecutive years only once during that period, in 1984 and 1985 (PPRC 1996).

Growth in use of services has also been low among broad categories of services—primary care, other EM services, surgical services, and nonsurgical services other than EM. Within these broad categories, rates of growth in service use have been more varied, however (see appendix). In cases where use of services has fallen, no evidence has emerged that beneficiaries have become less able to receive needed services. Instead, the decreases appear to be due to changes in treatment modalities or other factors (PPRC 1997).

## REFERENCES

Physician Payment Review Commission, *Annual Report to Congress 1996* (Washington, DC: 1996).

Physician Payment Review Commission, *Annual Report to Congress 1997* (Washington, DC: 1997).

**Chart C-1. Change in Payment and Use Per Beneficiary for Selected Services, 1991-1997**

Type of Service	Annual Percentage Change						Percentage of 1997 Physician Services Outlays
	1991-1996			1996-1997			
	Payment Per Service	Volume <sup>a</sup>	Count of Services <sup>b</sup>	Payment Per Service	Volume <sup>a</sup>	Count of Services <sup>b</sup>	
All services	0.6	3.7	2.6	-0.1	2.7	-1.1	100.0
Primary care services	5.6	3.7	3.0	5.2	4.2	3.5	24.3
Office and other outpatient visits	4.3	2.4	1.8	6.2	4.4	3.4	17.6
Emergency department visits	8.0	4.4	4.5	5.1	2.4	1.4	2.8
Nursing facility/rest home visits	9.4	5.6	5.8	4.8	9.0	7.5	2.3
Home visits	9.1	-1.3	-0.6	-3.3	4.5	4.1	0.2
Other evaluation and management services	4.8	4.1	1.3	3.0	3.0	1.7	18.8
Surgical services <sup>a</sup>	-1.7	3.1	6.4	-2.9	2.9	-9.0	21.1
Cataract lens replacement	-6.5	0.3	0.3	-2.9	5.1	5.2	2.9
Joint prosthesis	-2.6	6.9	6.4	-2.4	5.8	5.2	1.4
Coronary artery bypass graft	-2.4	6.8	10.3	-3.3	4.7	5.7	1.4
Transurethral prostate surgery	0.0	-8.1	-7.7	-3.2	-7.4	-7.4	0.3
Arthroscopy	-3.5	7.8	7.0	-2.4	15.7	15.3	0.2
Open prostate surgery	0.6	0.4	-0.7	-3.5	-1.5	-0.5	0.1
Other nonsurgical services	-2.2	3.7	2.4	-3.4	1.4	-2.8	35.8
Routine diagnostic radiology	-2.0	-2.0	0.1	-5.6	-3.5	-0.5	2.7
Electrocardiograms	<sup>c</sup>	<sup>c</sup>	<sup>c</sup>	-4.3	-1.3	-2.8	1.9
Echocardiograms	-6.5	12.8	16.0	-1.6	8.3	8.0	1.9
CAT scans	-2.4	3.7	5.5	-6.0	4.9	5.7	1.5
Colorectal endoscopy	-4.4	2.8	-1.7	-5.5	4.5	1.3	1.3
Magnetic resonance imaging	1.0	9.5	11.8	-3.0	12.4	12.2	1.2
Cardiac catheterization	<sup>d</sup>	<sup>d</sup>	<sup>d</sup>	-5.6	2.8	2.9	1.0
Upper GI endoscopy	-7.3	3.7	2.3	-5.6	5.3	5.4	0.9
Angioplasty	-9.0	13.7	13.4	-5.8	7.8	3.1	0.5
Mammography	-0.3	-1.3	2.0	11.2	1.0	2.4	0.4

NOTE: Data are for the first six months of each year. Partial services (for example, surgical services limited to post-operative care only) are excluded.

<sup>a</sup> Measures change in outlays if prices were frozen (number and intensity of services).

<sup>b</sup> Measures change in the number of services only.

<sup>c</sup> Not applicable due to payment change.

<sup>d</sup> Not applicable due to reporting change.

<sup>e</sup> The sharp drop in the count of surgical services from 1996 to 1997 was due to a change in the reporting of a nail procedure (debridement) frequently used by beneficiaries.

SOURCE: Medicare Payment Advisory Commission analysis of 1991-1997 Medicare claims, 5 percent sample of beneficiaries.



## GRADUATE MEDICAL EDUCATION AND TEACHING HOSPITALS

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The Medicare Payment Advisory Commission is required to examine and develop recommendations for an August 1999 report to the Congress on Medicare and other federal payment policies regarding teaching hospitals and graduate medical education. This chapter provides some trend information on Medicare's support for graduate medical education, including spending, the distribution of Medicare teaching payments, teaching hospital's financial status, and the number and specialty distribution of residents.

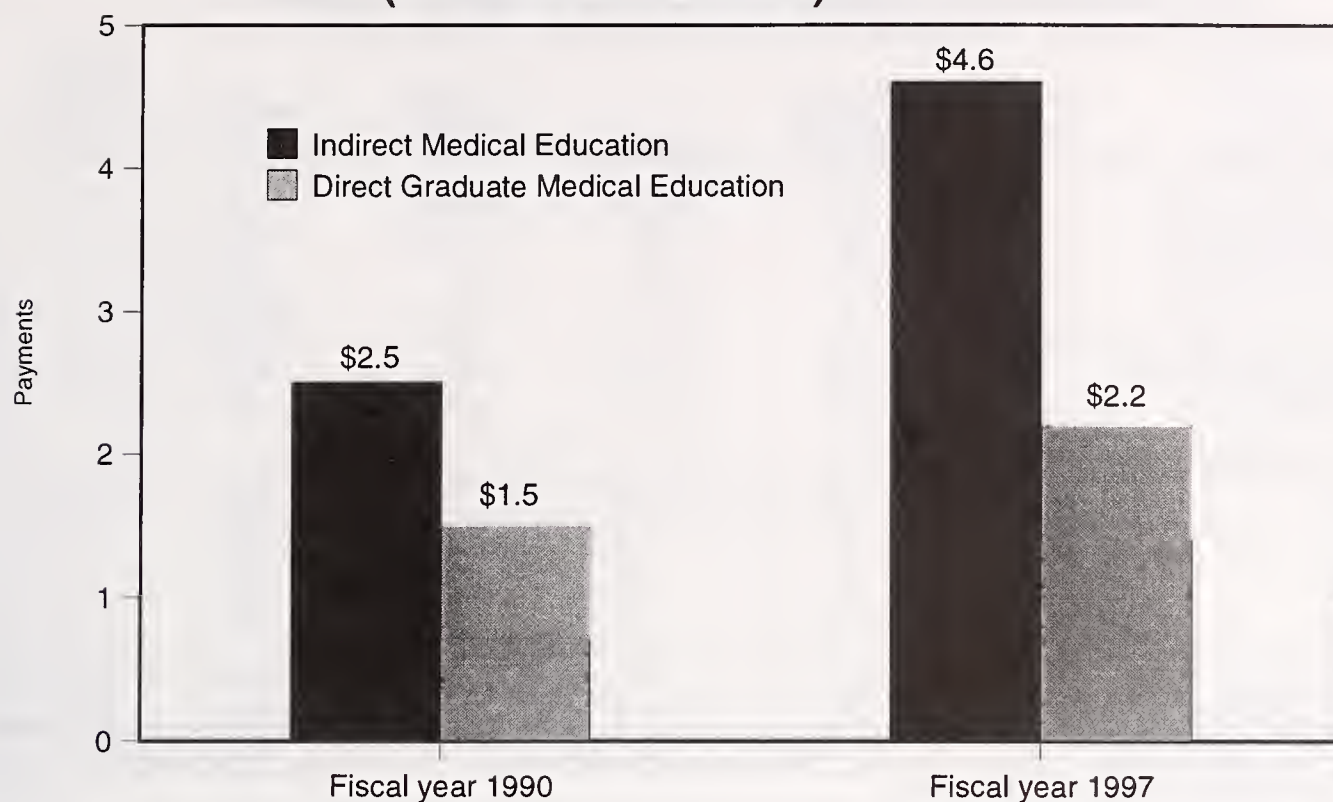
Medicare has played a major role in the financing of graduate medical education, as it is the only payer to recognize these costs explicitly in its hospital payments on a nationwide basis. The program provides two kinds of payments related to residency training in teaching hospitals: direct graduate medical education payments and the indirect medical education adjustment to payment rates under the hospital inpatient prospective payment system (PPS).

The direct graduate medical education (GME) payment is for the salary and benefit costs of residents, faculty supervisory expenses, space costs and other program related expenses, and related facility overhead costs. The payment is based on hospital-specific per resident payment amounts, which were developed from 1984 per resident costs updated for inflation. Medicare pays its share of the per resident amount based on its share of inpatient days.

The indirect medical education (IME) adjustment is an add-on to the PPS per case payment rates. The level of the operating adjustment is determined using the ratio of residents to hospital beds. From fiscal years 1987 to 1997, the adjustment was set at approximately 7.7 percent for every 10 percent increment in that ratio. The Balanced Budget Act of 1997 lowered the adjustment to 7.0 percent in fiscal year 1998, gradually falling to 5.5 percent by fiscal year 2001. The level for capital payments is based on the ratio of residents to the average daily census in the facility. The current adjustment for the capital indirect adjustment is set at 2.8 percent for every 10 percent increment in the ratio of residents to average daily census in the facility.

More than 1,200 hospitals receive Medicare direct GME or IME payments. These payments, however, are highly concentrated. The level of Medicare teaching payments per resident can be substantial, but is also highly variable across hospitals. Several of the charts in this chapter show how Medicare teaching payments are concentrated and how they vary across hospitals. The financial condition of teaching hospitals also is compared with that of other hospitals. The chapter also examines the contribution of international medical school graduates to the overall supply of residents and how the specialty distribution of residents is changing.

**Chart 7-1. Medicare Payments to Teaching Hospitals for Resident Training, Fiscal Years 1990 and 1997  
(In Billions of Dollars)**



SOURCE: Prospective Payment Assessment Commission and the Congressional Budget Office.

Medicare provided teaching hospitals with almost \$7 billion in teaching-related payments in 1997. About two-thirds of these were through the indirect medical education adjustment, which is intended to compensate teaching hospitals for their relatively higher patient care costs. The other third is for direct graduate medical education expenses, which are intended to compensate hospitals for Medicare's share of resident and supervisory physician compensation expenses as well as hospital overhead costs related to training programs.

**Chart 7-2. Distribution of Residents and Medicare Teaching Hospital Payments, by Selected Hospital Groups, 1995**

Hospital Group	Teaching Hospitals	Residents	Medicare Direct Payments	Direct GME Costs	Medicare Indirect Teaching Payments
Major teaching (IRB >.25)	19.5%	67.0%	63.2%	64.5%	66.5%
Other teaching (IRB <.25)	68.4	26.9	35.5	30.1	33.5
PPS-excluded teaching	12.1	6.1	1.3	5.4	0.0
Academic medical center	9.1	42.7	34.4	37.6	40.8
Other large teaching hospitals (100+)	11.5	31.0	32.9	33.7	30.7
Moderate teaching (25-99)	26.2	19.7	24.4	21.9	22.0
Small teaching (<25)	53.2	6.6	8.3	6.8	6.3
Number of residents					
200+	9.6	51.3	45.0	47.2	48.8
100-199	10.7	22.0	21.8	23.7	22.2
50-99	10.9	11.8	14.0	13.3	13.4
25-49	15.7	8.3	10.9	8.9	9.1
10-24	18.2	4.5	6.0	4.7	4.5
<10	34.9	2.1	2.3	2.2	2.0
Teaching and DSH	56.5	78.8	78.0	79.2	78.2
Teaching and no DSH	43.5	21.2	22.0	20.8	21.8

NOTE: Totals may not sum to 100 due to rounding. DSH = disproportionate share. GME = graduate medical education. IRB = intern and resident to bed ratio.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Teaching hospitals vary considerably in the size and intensity of their teaching programs. About one in every eleven teaching hospitals is an Academic Medical Center; these are facilities with close ties to medical schools. They account for more than two-fifths of residents and a proportional share of indirect medical education payments but about one-third of Medicare direct graduate medical education payments. More than half of all teaching hospitals train fewer than 25 residents, these hospitals receive less than one-tenth of all Medicare teaching payments. Hospitals excluded from Medicare's prospective payment system train a little more than one-tenth of all residents and account for about 5 percent of total direct graduate medical education costs, but receive only about 1 percent of total Medicare direct payments. Four-fifths of residents are in hospitals that receive Medicare disproportionate share payments.



**Chart 7-3. Distribution of Residents and Medicare Teaching Hospital Payments, by Region, 1995**

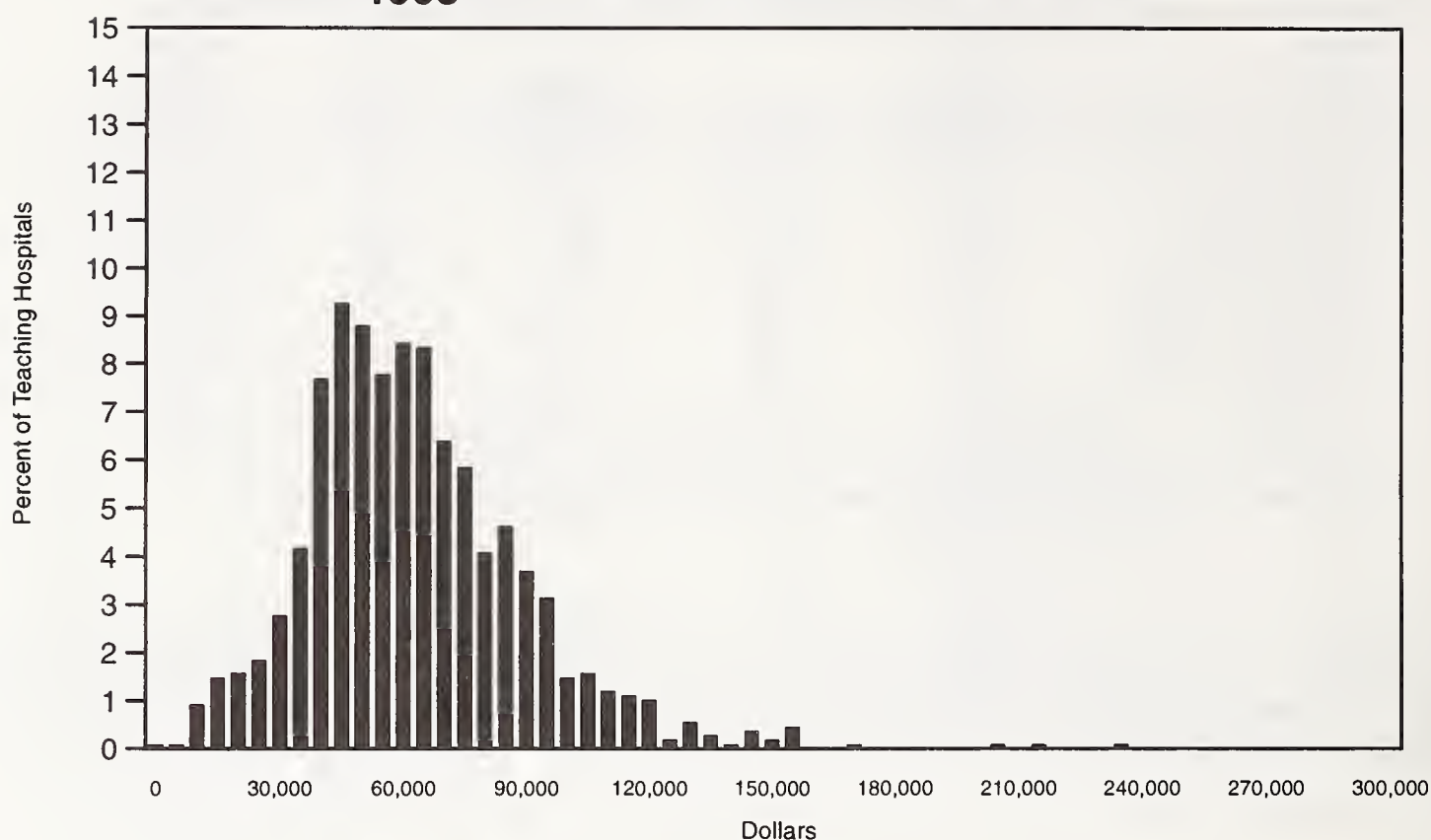
Region	Teaching Hospitals	Residents	Medicare Direct GME Payments	Direct GME Costs	Medicare Indirect Teaching Payments
New England	7.0%	8.4%	9.3%	8.4%	10.6%
Middle Atlantic	20.4	26.3	37.1	31.5	30.1
South Atlantic	13.1	13.8	12.0	14.0	12.9
East North Central	19.9	19.9	21.1	19.7	22.0
East South Central	4.7	3.9	2.8	3.7	3.4
West North Central	8.9	5.9	6.0	5.4	6.3
West South Central	9.4	7.7	4.1	6.8	4.7
Mountain	4.6	3.1	1.9	2.3	2.3
Pacific	12.0	11.0	5.7	8.2	7.8

NOTE: Totals may not sum to 100 due to rounding. GME = graduate medical education.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

More than one-quarter of residents are trained in the Middle Atlantic states. Teaching hospitals in this region receive a larger than proportionate share of direct GME payments. Hospitals in the Pacific, Mountain, and West South Central Regions receive a less than proportionate share of direct GME and IME payments.

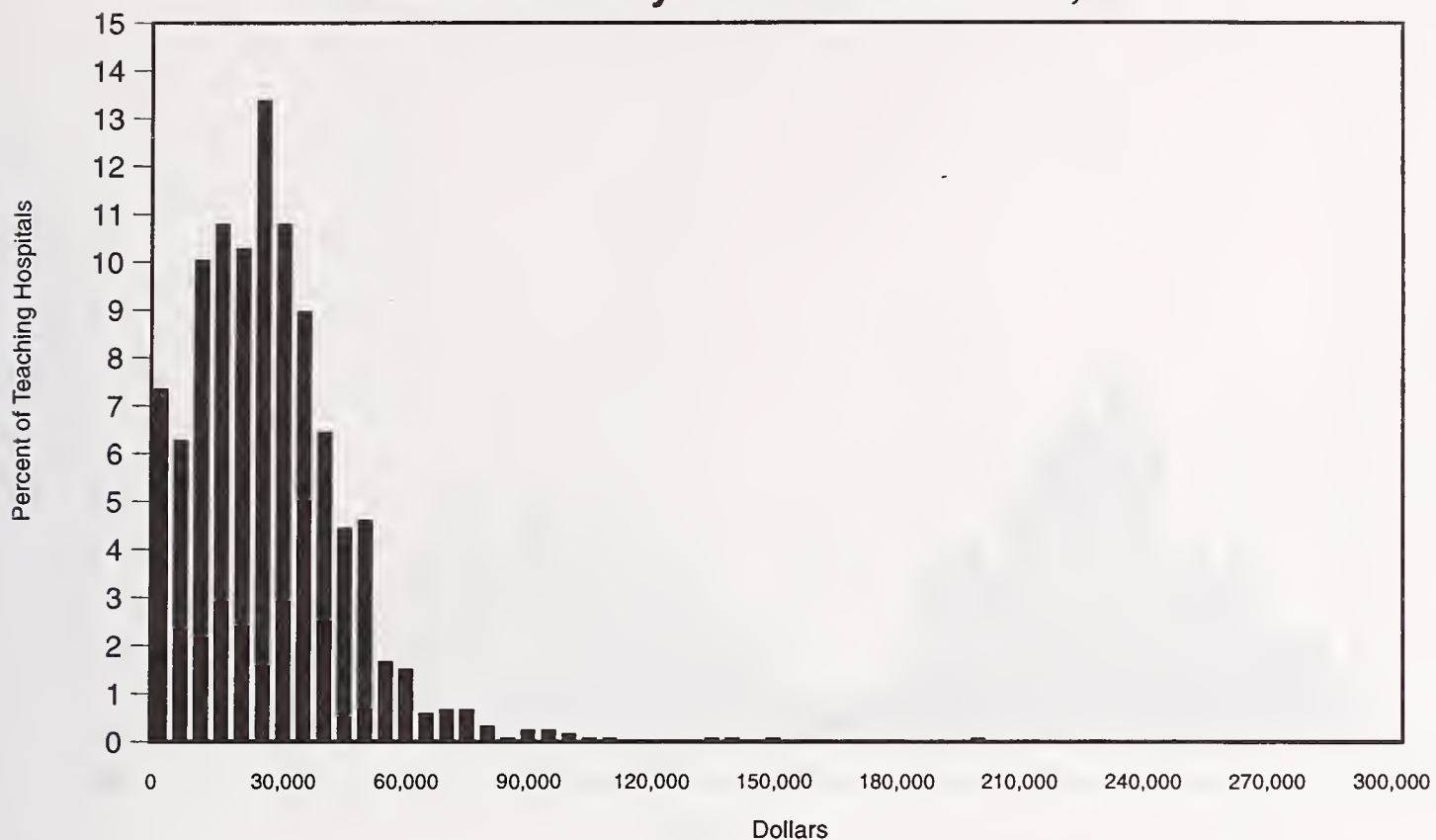
**Chart 7-4. Distribution of Per Resident Payment Amounts, 1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Medicare's direct GME payments are based on Medicare's share of the hospital-specific per resident payment amounts. The per resident payment amounts are determined using audited 1984 costs, updated for inflation. There is wide variation in the distribution of these amounts. The average per resident payment amount in 1995 was just over \$70,000. More than one in ten residents were in hospitals with per resident payment amounts of more than \$100,000. A few hospitals have per resident payment amounts over \$200,000. About 10 percent of residents are in hospitals with per resident payment amounts of less than \$40,000.

**Chart 7-5. Distribution of Medicare Direct Graduate Medical Education Payments Per Resident, 1995**

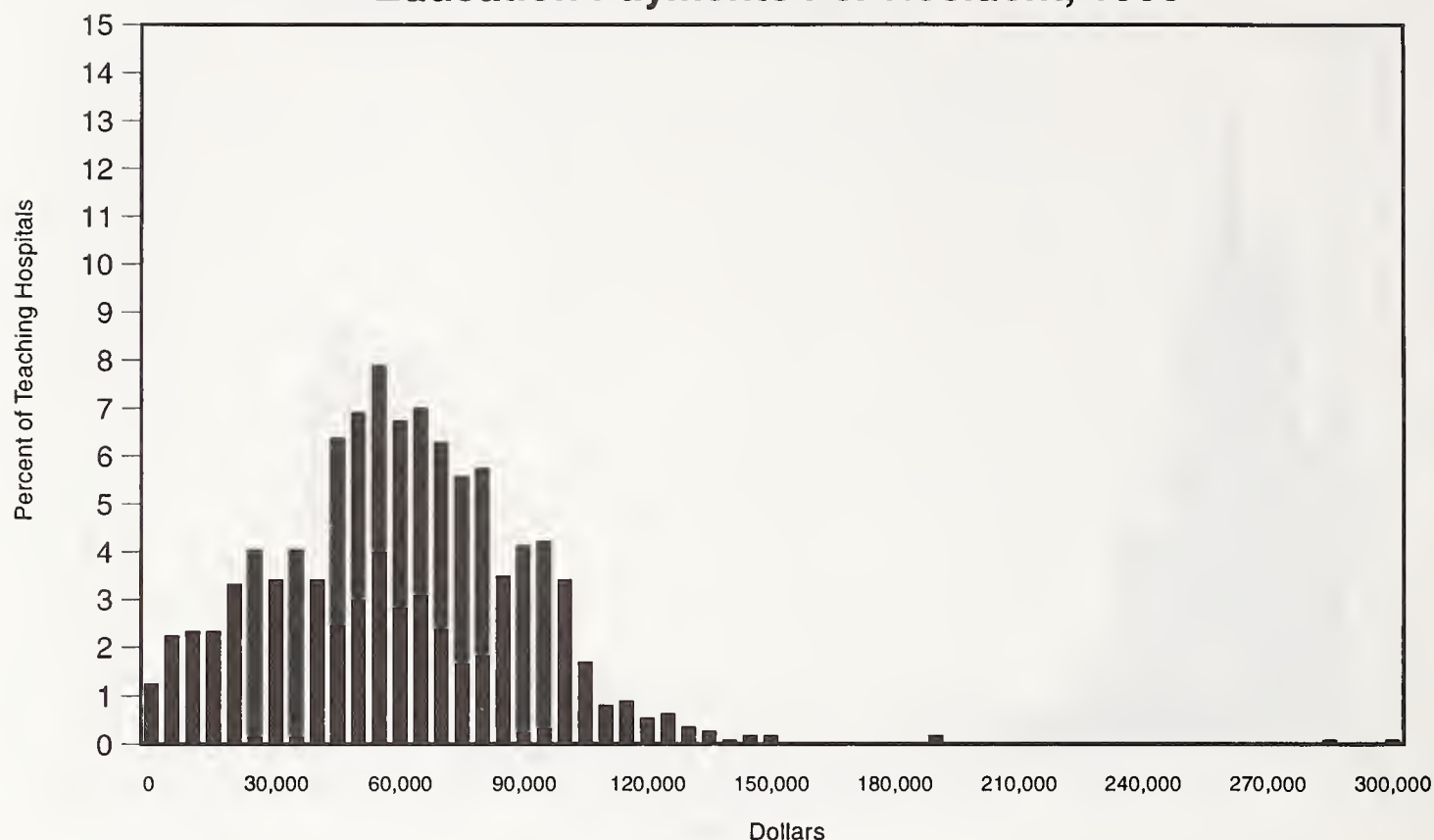


SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The distribution of Medicare GME payments per resident is much narrower than the distribution of the per resident payment amounts for which those payments are based. This is because Medicare pays its share of the per resident payment amount based on Medicare's share of inpatient days. The average Medicare direct GME payment per resident in 1995 was about \$24,000. Ten percent of hospitals received more than \$50,000 in direct GME payments per resident from Medicare, while another 10 percent received less than \$7,000 per resident.



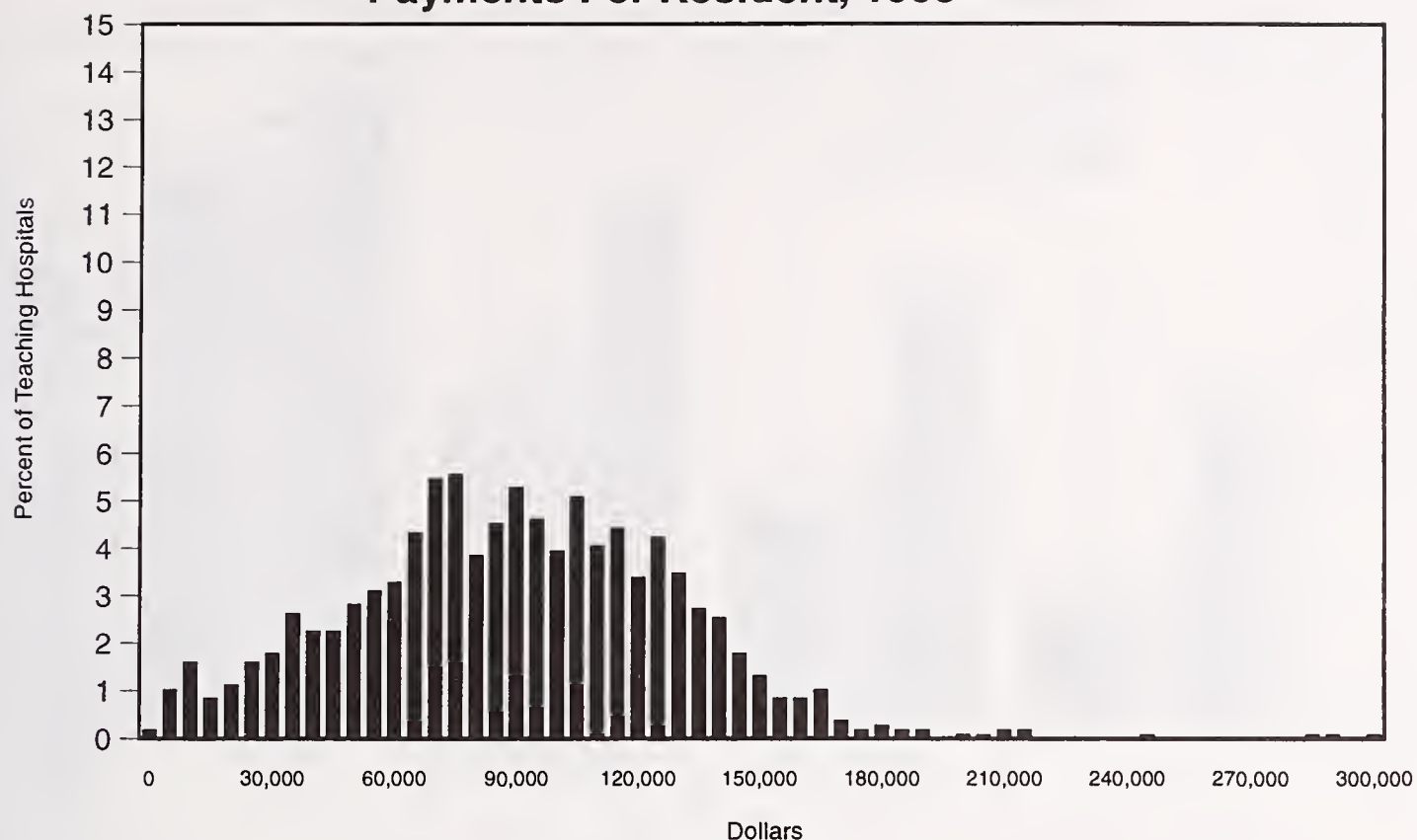
**Chart 7-6. Distribution of Medicare Indirect Medical Education Payments Per Resident, 1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

There is wide variation in the amount of Medicare IME payments a hospital receives per resident, with some hospitals receiving very little IME funds and others receiving well over \$100,000 per resident. The average IME payment per resident was about \$60,000 in 1995. The amount of IME payments a hospital receives per resident is mostly a function of the hospital's Medicare patient volume, case-mix, and hospital area wage index.

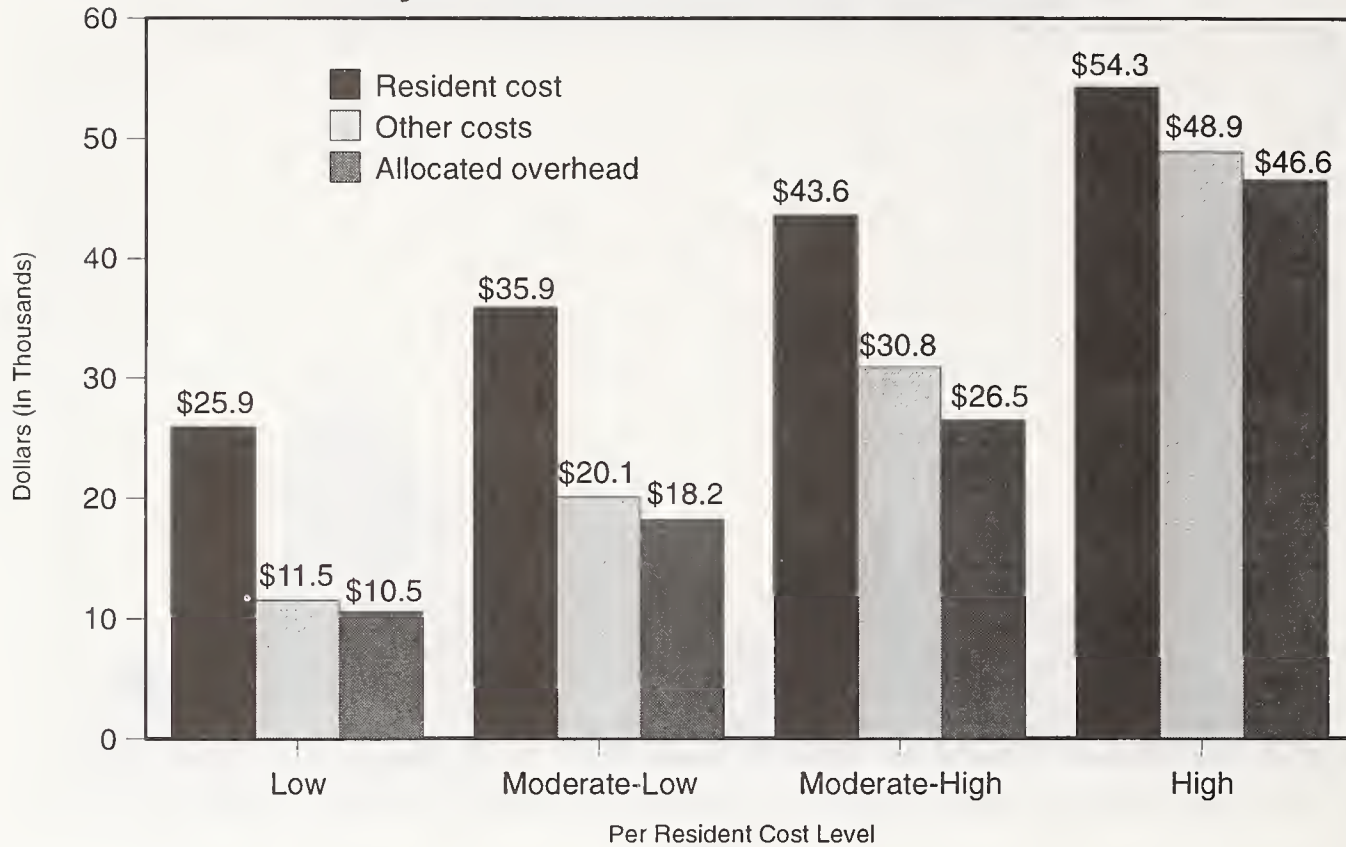
**Chart 7-7. Distribution of Medicare Teaching Hospital Payments Per Resident, 1995**



SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

The average resident provided hospitals with \$84,000 in additional Medicare revenue in 1995 from the combination of direct GME payments and IME payments. There is wide variation in the amount of teaching payments hospitals receive, however. One quarter of all residents were in hospitals that received more than \$110,000 in combined Medicare IME and GME payment per resident. Only 10 percent of residents were in hospitals that received less than \$35,000 per resident, which is close to the average third-year resident salary in 1995.

**Chart 7-8. Components of Direct GME Per Resident Cost, by the Level of Per Resident Costs, 1995**



NOTE: Per resident cost level groups are defined by dividing teaching hospitals into four equal groups based on the level of reported per resident costs from the hospital cost reports.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care financing Administration.

The variation in per resident direct GME payment amounts is mostly due to differences in the physician supervisory expenses and hospital overhead costs allocated to the GME cost center. Differences in resident salary levels only contribute modestly to the overall variation. Allocated overhead costs and other direct costs (which are mostly physician supervisory expenses) are more than four times as high in the hospitals with high per resident costs as in those with low per resident costs.



**Chart 7-9. Medicare Hospital Inpatient PPS Margin, by Hospital Group, Fiscal Years 1984-1995 (In Percent)**

Hospital Group	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
All hospitals	13.4%	13.0%	8.7%	5.9%	2.7%	0.3%	-1.5%	-2.4%	-0.9%	1.1%	5.5%	10.5%
Non-teaching	11.2	10.1	5.2	2.5	-0.7	-3.2	-5.2	-6.4	-5.0	-3.1	0.6	6.4
Teaching	15.8	16.0	12.0	8.9	5.8	3.4	1.7	1.0	2.5	4.6	9.5	13.9
Major teaching (IRB >.25)	18.6	19.7	15.2	12.9	9.9	7.6	7.0	7.4	9.2	10.8	16.9	21.0
Other teaching (IRB <.25)	14.7	14.3	10.3	6.9	3.7	1.2	-1.2	-2.6	-1.5	0.6	5.0	9.5
AMC	18.6	20.3	15.0	12.5	9.5	6.8	7.4	7.0	9.0	10.2	16.9	21.4
Other large teaching (100+)	18.6	19.0	15.6	12.6	10.1	7.9	5.9	5.8	7.7	9.3	14.9	18.6
Moderate teaching (25-99)	16.2	16.2	11.8	8.7	5.4	2.9	0.7	-0.3	1.0	2.8	7.0	11.5
Small teaching (<25)	13.3	12.5	8.5	5.1	1.8	-0.5	-3.0	-4.4	-5.2	-0.6	3.2	7.9
Number of residents												
200+	19.2	21.1	15.9	13.8	10.1	8.6	8.2	8.2	10.8	11.3	18.1	22.0
100-199	18.0	18.0	14.7	11.1	9.5	6.1	4.6	4.3	3.3	7.7	12.6	16.9
50-99	16.4	17.4	12.5	9.4	6.0	3.6	1.7	0.3	2.7	4.3	9.5	13.6
25-49	16.0	15.0	10.9	7.9	4.7	2.2	-0.4	-1.0	-0.7	1.6	4.9	9.5
10-24	13.6	13.0	9.5	6.3	2.9	0.7	-2.0	-3.4	-2.3	0.5	2.4	8.8
<10	13.1	12.1	7.8	4.3	1.1	-1.3	-3.7	-5.1	-4.3	-1.4	0.9	7.2
Teaching and DSH	15.9	16.0	12.3	10.0	7.9	5.2	4.0	3.5	4.9	7.2	12.4	16.7
Teaching and no DSH	15.7	16.0	11.3	6.6	2.4	-0.3	-3.4	-4.2	-2.9	-1.6	2.5	7.3

NOTE: AMC = academic medical center. DSH = disproportionate share. IRB = intern and resident to bed ratio.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Teaching hospitals have higher aggregate PPS margins than non-teaching hospitals. PPS margins are also highly correlated with the level of teaching in the hospital, with larger teaching hospitals having higher margins than hospitals with fewer residents. As is the case with all hospitals, teaching hospitals' PPS margins have steadily increased since 1991. The largest teaching hospitals (major teaching, academic medical centers, and hospitals with over 200 residents) had their highest aggregate PPS margins ever in 1995.

**Chart 7-10. Hospital Total Revenue Margin, by Hospital Group, Fiscal Years 1984-1995 (In Percent)**

Hospital Group	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
All hospitals	7.3%	6.6%	4.3%	3.6%	3.5%	3.6%	3.6%	4.4%	4.3%	4.4%	5.0%	5.8%
Non-teaching	7.4	6.4	4.5	3.9	3.6	3.9	4.4	4.8	5.0	4.9	5.9	6.4
Teaching	7.4	6.9	4.3	3.5	3.5	3.4	3.0	4.2	3.8	4.1	4.4	5.2
Major teaching (IRB > .25)	5.4	5.8	2.4	2.4	2.5	1.9	1.0	3.5	3.2	3.4	3.2	4.0
Other teaching (IRB < .25)	8.3	7.3	5.4	4.2	4.2	4.5	4.4	4.6	4.3	4.6	5.4	6.2
AMC	4.1	5.2	2.2	2.5	2.6	1.3	0.3	4.3	3.9	3.4	3.7	4.5
Other large teaching (100+)	7.8	7.5	3.4	3.0	3.6	3.1	2.6	3.6	3.1	3.5	3.5	4.6
Moderate teaching (25-99)	8.1	7.2	5.0	4.1	4.2	4.8	4.2	4.4	4.3	4.7	4.8	5.7
Small teaching (<25)	8.4	7.2	5.8	4.2	3.5	4.1	4.2	4.4	4.0	4.4	5.5	6.1
Number of residents												
200+	5.0	5.6	2.3	2.5	2.9	1.8	0.3	3.7	3.2	3.1	3.4	4.0
100-199	7.1	7.1	3.5	3.1	3.4	2.7	3.1	4.4	4.0	4.0	3.9	5.5
50-99	8.5	7.1	5.4	3.6	4.2	4.7	4.1	4.0	4.3	4.8	4.6	6.4
25-49	7.8	7.4	4.6	4.5	4.2	4.7	4.4	4.7	4.3	4.7	5.0	4.9
10-23	7.9	6.9	5.7	4.3	3.9	4.6	4.0	4.4	4.5	4.8	5.5	6.1
<10	8.7	7.5	5.9	3.8	3.2	3.7	4.3	4.3	3.6	4.2	5.5	6.0
Teaching and DSH	6.8	6.1	3.5	2.9	2.9	3.0	2.4	3.9	3.7	3.8	4.2	4.8
Teaching and no DSH	8.7	8.5	6.1	5.1	5.1	4.6	4.6	5.0	4.1	4.8	5.1	6.6

NOTE: AMC = academic medical center. DSH = disproportionate share. IRB = intern and resident to bed ratio.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Teaching hospitals have tended to have lower aggregate total margins than nonteaching hospitals. Academic medical centers, major teaching hospitals, and hospitals with more than 200 residents tend to have lower aggregate total margins than other teaching hospitals. As was the case with most hospital groups, teaching hospitals' aggregate total margin reached its highest level in ten years in 1995.

**Chart 7-11. PPS and Total Margins, by Hospital Group,  
Fiscal Year 1995 (In Percent)**

Hospital Group	PPS Inpatient	Percent With Negative PPS Inpatient Margin	Total Hospital Margin	Percent with Negative Total Margin
All Hospitals	10.5%	33.2%	5.8%	20.7%
Non-teaching	6.4	36.4	6.4	21.2
Teaching	13.9	21.6	5.2	18.7
Major teaching (IRB>.25)	21.0	7.5	4.0	21.5
Other teaching (IRB<.25)	9.5	26.1	6.2	17.3
Academic medical center	21.4	2.8	4.5	18.9
Other large teaching hospitals (100+)	18.6	7.9	4.6	16.0
Moderate teaching (25-99)	11.5	15.3	5.7	15.0
Small teaching (<25)	7.9	31.6	6.1	20.9
Number of residents				
200+	22.0	1.7	4.0	19.1
100-199	16.9	8.8	5.5	14.3
50-99	13.9	10.5	6.4	12.0
25-49	9.5	18.7	4.9	17.7
10-24	8.8	28.8	6.1	19.6
<10	7.2	33.2	6.0	21.6
Teaching and DSH	16.7	13.7	4.8	20.3
Teaching and no DSH	7.3	36.2	6.2	14.6

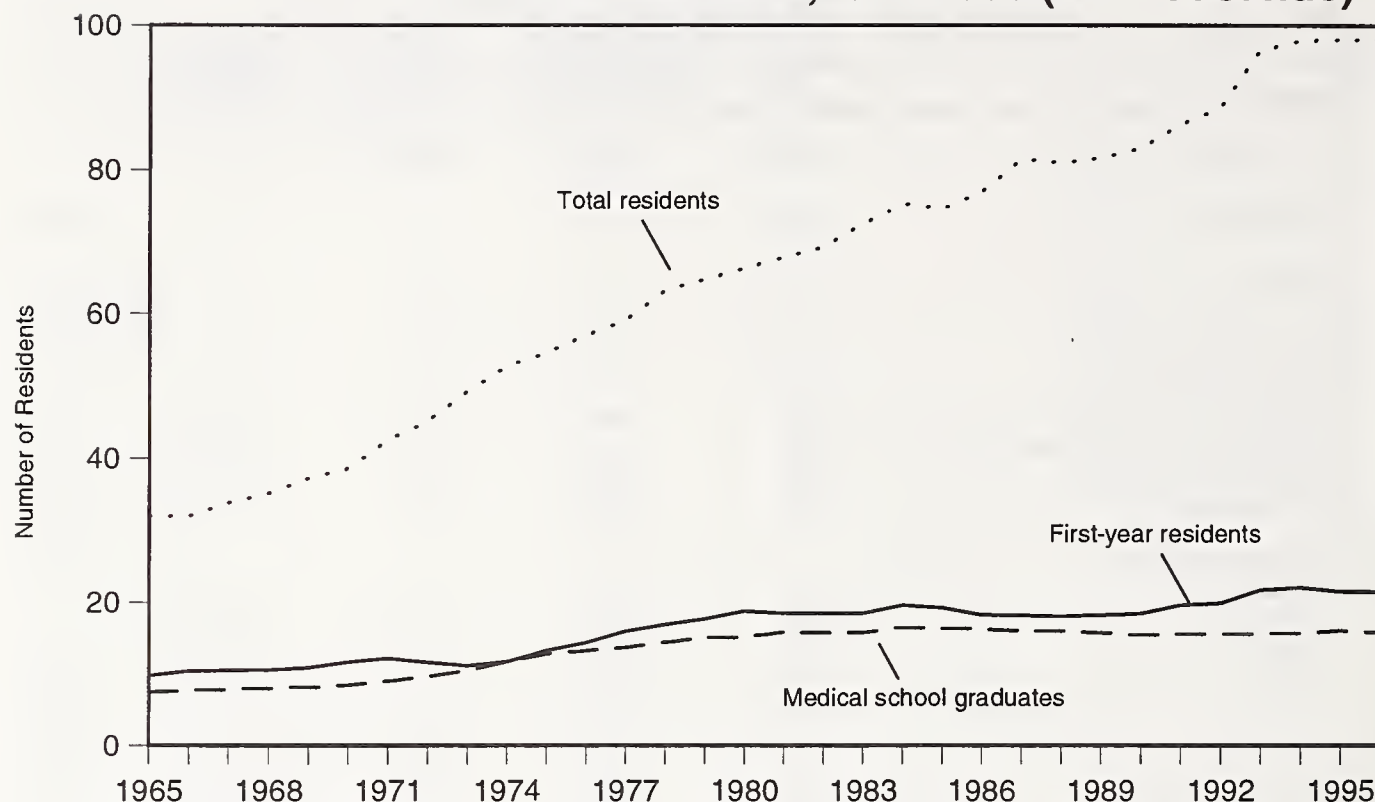
NOTE: DSH = disproportionate share. IRB = intern and resident to bed ratio.

SOURCE: Medicare Payment Advisory Commission analysis of Medicare Cost Report data from the Health Care Financing Administration.

Only a small proportion of academic medical centers and other large teaching hospitals had negative PPS margins in 1995. Teaching hospitals are slightly less likely to have negative total margins than other hospitals. Among teaching hospitals, the largest and smallest teaching hospitals are a little more likely to have negative total margins. A smaller proportion of academic medical centers had negative margins in 1995 than in any previous year since PPS began.



**Chart 7-12. Medical School Graduates, First-Year Residents, and Total Residents, 1965-1996 (In Thousands)**

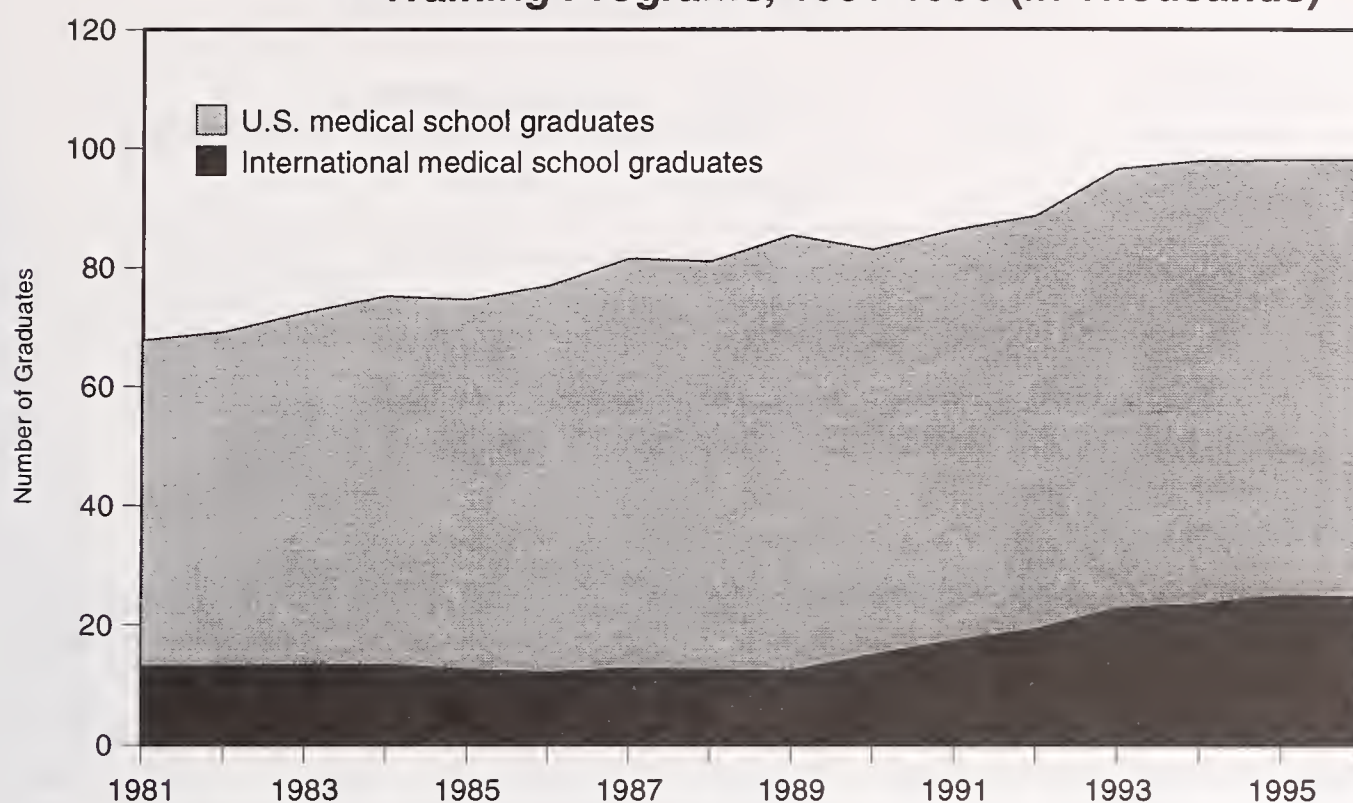


NOTE: Multi-year averages have been used in some cases to fill in for missing data and correct for data anomalies. Numbers include only residents in approved allopathic training programs.

SOURCE: Selected medical education issues of the *Journal of the American Medical Association*.

The number of residents in approved training programs has increased dramatically over the past 30 years. Some of the fastest growth took place between 1990 and 1993. There has been very little growth, however, in the total number of residents since 1993. The number of medical school graduates grew slightly between 1965 and the mid-1970s, but has remained relatively constant since. The number of first-year residents tracks the number of medical school graduates although at a slightly higher level, with the difference growing some in the 1990s.

**Chart 7-13. Number of U.S. and International Medical School Graduates in Allopathic Residency Training Programs, 1981-1996 (In Thousands)**

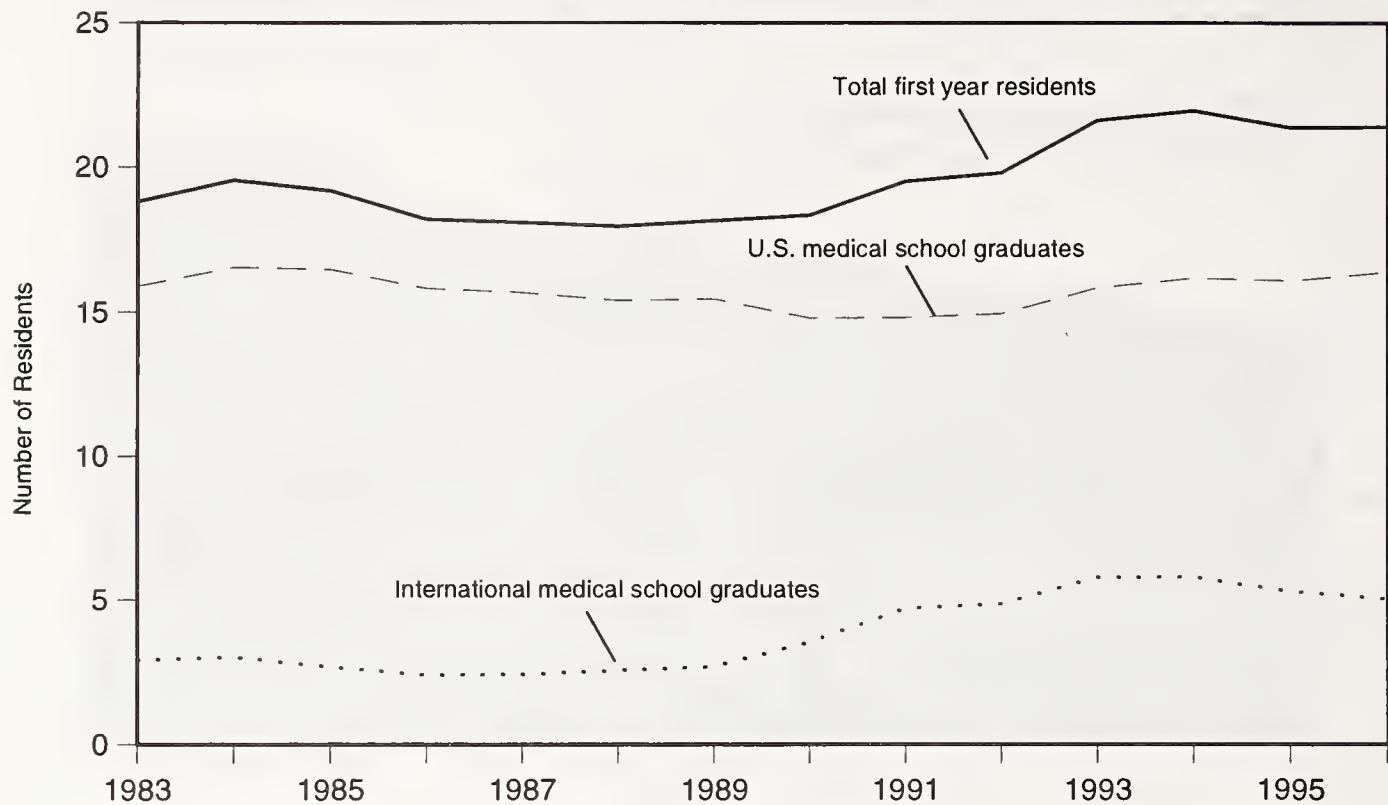


NOTE: Numbers include only residents in approved allopathic training programs.

SOURCE: Selected medical education issues of the *Journal of the American Medical Association*.

A substantial proportion of the growth in residents is due to increases in the number of graduates of foreign medical schools, or international medical school graduates (IMGs), entering residency training in the U.S. Between 1990 and 1996, the number of IMGs increased by over 60 percent, from around 15,000 in 1990, to almost 25,000 in 1996. In 1996, IMGs accounted for 25 percent of residents, compared to 18 percent in 1990.

**Chart 7-14. Total Number of U.S. and International Medical School Graduates in First Year of Residency Training, 1983-1996 (In Thousands)**



NOTE: Numbers include only residents in approved allopathic training programs.

SOURCE: Selected medical education issues of the *Journal of the American Medical Association*.

The number of people entering residency training increased in the 1990s, with most of this increase being IMGs. The number of first-year IMG residents doubled between the late 1980s and the mid-1990s. The number of graduates from U.S. medical schools entering residency training has been fairly constant. In 1995 and 1996, there was a slight decline in the number of IMG residents entering their first residency training program in the United States.



**Chart 7-15. Distribution of Total and First-Year Residents, by Selected Specialties**

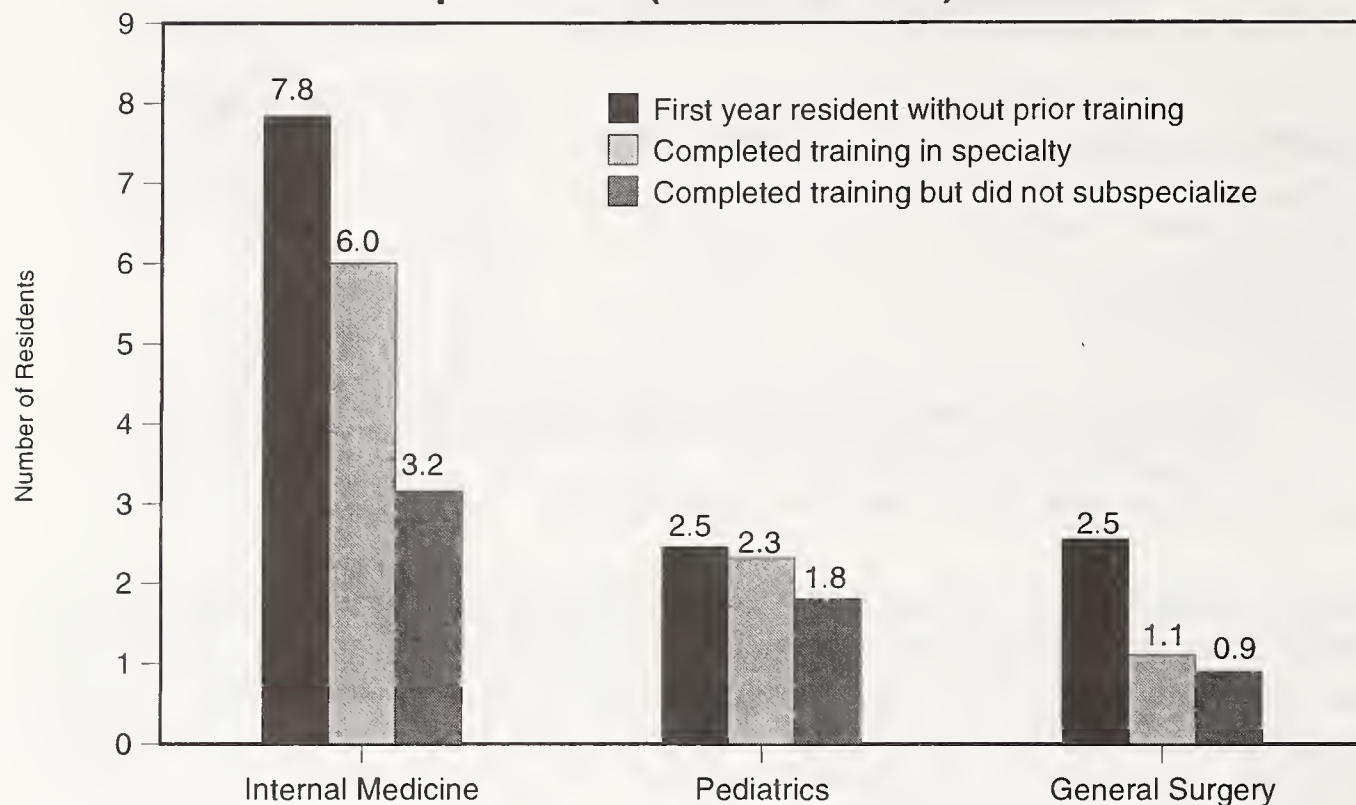
Specialty	First Year Residents, 1994	All Residents 1996	Residents Who Completed Training, 1996
Primary care	64.4%	44.8%	38.3%
Medical and pediatric subspecialties	0.0	9.2	15.2
General surgery	11.9	8.1	3.8
Surgical subspecialties	2.5	9.0	10.7
Hospital-based specialties	8.5	14.0	17.6
Psychiatry/neurology	5.4	7.4	8.2
Other	7.4	7.6	6.1

NOTE: Totals may not sum to 100 due to rounding. Percentages include only residents in approved allopathic training programs. The counts of residents who completed training are net of residents that enter subspecialty training in a given field.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Medical Association.

The specialty distribution of first-year residents is vastly different from the distribution of all residents in training and those finished with training and entering medical practice. In 1994, about 64 percent of residents entered training in the primary care specialties (family practice, internal medicine, pediatrics, and obstetrics and gynecology), compared to 45 percent of all residents in training in 1996. An even smaller proportion of residents (38 percent) leave residency training after completing training in a single primary care specialty.

**Chart 7-16. Number of Residents Starting and Completing Training Without Subspecializing, by Selected Specialties (In Thousands)**



NOTE: Numbers include only residents in allopathic training programs. First-year resident counts for internal medicine and pediatrics are from 1994 and those for general surgery are from 1992. The count of residents for those completing training are from 1996. The counts of residents who did not subspecialize are determined by subtracting from the number of residents completing training the number that started a subspecialty training program in 1996.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Medical Association.

Many residents enter internal medicine, pediatrics, and general surgery specialties before moving into other medical and surgical specialties. About one-quarter of the residents entering internal medicine in their first year complete their initial residency training in another specialty. One year of internal medicine training is often a prerequisite to entering training in certain specialty programs. A similar situation applies to general surgery, in which only 43 percent of the residents entering first-year general surgery residencies completed a general surgery residency. Many who complete these residency programs will also subspecialize. The subspecialization rate for internal medicine is close to 50 percent, its a little less than 25 percent in pediatrics, and about 18 percent in general surgery.

**Chart 7-17. Distribution of First-Year Residents, by Selected Specialties, 1984-1996**

Specialty	1984	1990	1996
Primary care	62.6%	62.2%	66.5%
Medical and pediatric subspecialties	0.0	0.0	0.0
General surgery	13.8	13.1	11.2
Surgical subspecialties	2.6	2.2	1.5
Hospital-based specialties	7.7	8.6	7.5
Psychiatry/neurology	5.0	5.1	4.8
Other	8.2	8.7	8.5

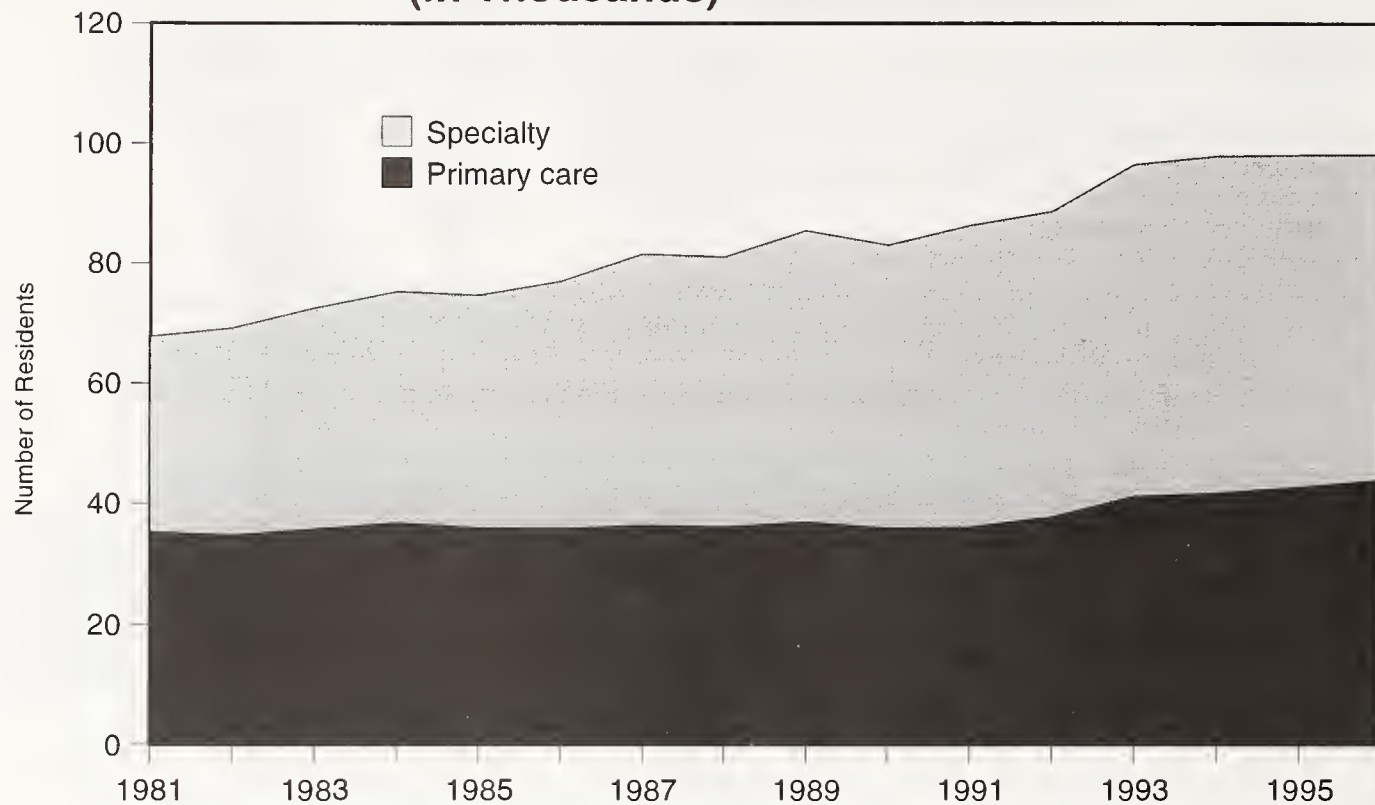
NOTE: Totals may not sum to 100 due to rounding. Percentages include only residents in approved allopathic training programs.

SOURCE: Medicare Payment Advisory Commission analysis of *Journal of the American Medical Association*, medical education issues.

The proportion of residents entering training in one of the primary care specialties (family practice, internal medicine, pediatrics, and obstetrics and gynecology) increased slightly between 1990 and 1996. By contrast, a smaller share of residents are entering general surgery and surgical specialties in the first year. The proportion of first-year residents in other specialties remained fairly constant over the period, however.



**Chart 7-18. Number of Residents Training in Primary Care and Specialty Programs, 1981-1996 (In Thousands)**

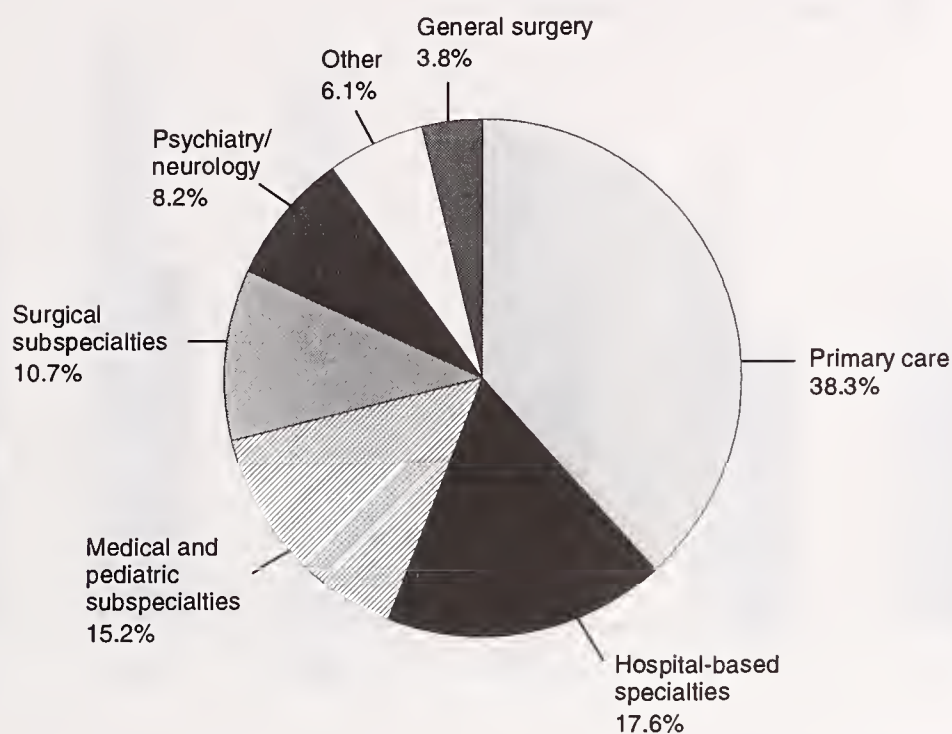


NOTE: Numbers include only residents in approved allopathic training programs. Primary care includes family practice, internal medicine, pediatrics, and obstetrics and gynecology.

SOURCE: Selected medical education issues of the *Journal of the American Medical Association*.

Since 1990, the total number of residents training in the primary care specialties (family practice, internal medicine, pediatrics, and obstetrics and gynecology) has increased at a faster rate than the number of residents training in other specialties. In 1995 and 1996, the number of residents in non-primary care residencies actually declined, while the number of residents in primary care specialties increased.

**Chart 7-19. Distribution of Residents Completing All Training, 1996**

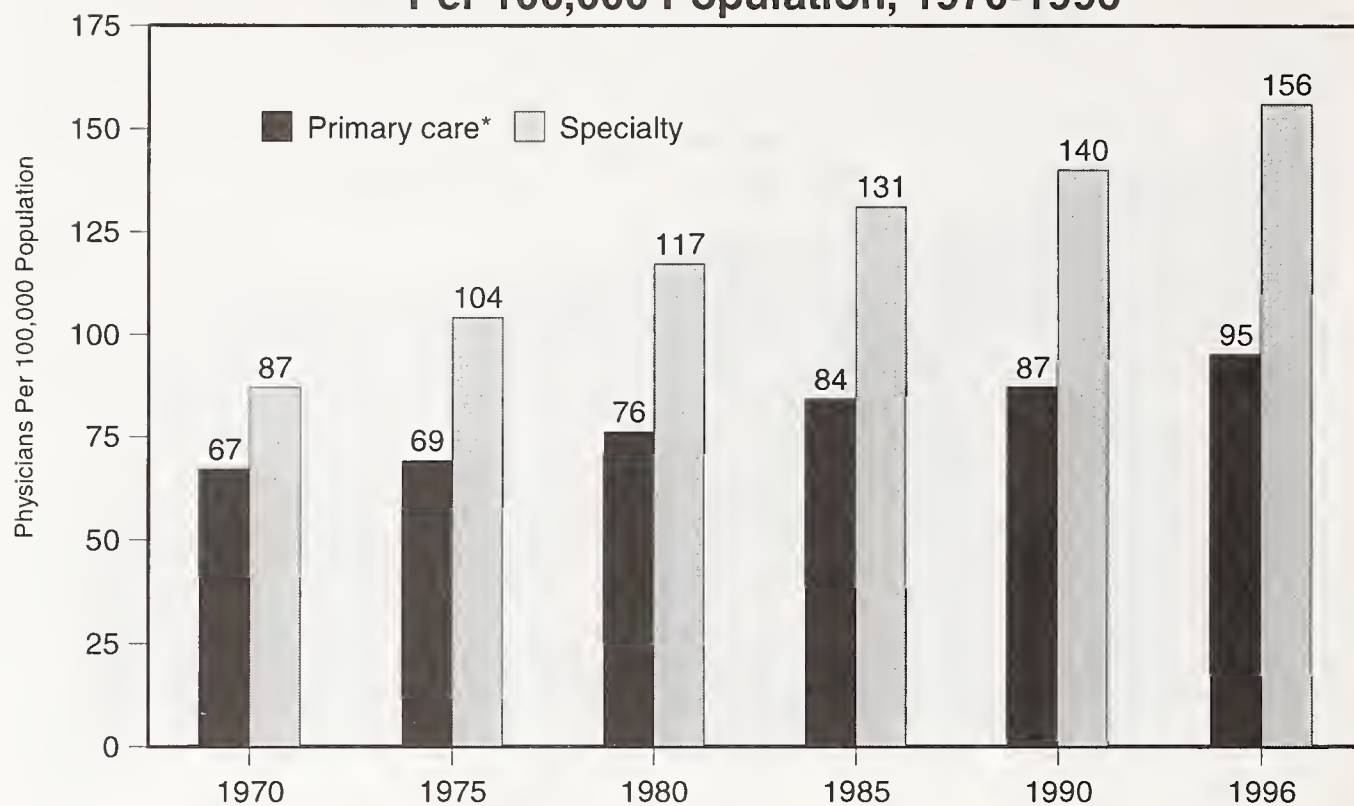


NOTE: Numbers are estimated by subtracting from the distribution of residents completing a training program the number of residents that started training in a subspecialty.

SOURCE: Medicare Payment Advisory Commission analysis of data from the American Medical Association.

Slightly under two-fifths of residents finished with residency training in 1996 completed their training in one of the primary care specialties (family practice, internal medicine, pediatrics, and obstetrics and gynecology). About the same proportion of current nonresident patient care physicians practice in a primary care specialty.

**Chart 7-20. Active Primary Care and Specialty Physicians Per 100,000 Population, 1970-1996**



NOTE: Numbers include residents.

\* Includes general and family practices, internal medicine, pediatrics, and obstetrics and gynecology.

SOURCE: Lillian Rundolf, *Physician Characteristics and Distribution in the U.S., 1996-1997*, American Medical Association.

The physician-to-population ratio has increased steadily over the past 25 years. Since 1990, the number of active primary care physicians (general and family practice, internal medicine, pediatrics, and obstetrics and gynecology) per 100,000 population has increased by 42 percent. The growth rate in the number of specialty physicians over the same period was almost double that. In 1996, primary care physicians made up a smaller proportion of the physician workforce than in 1970.



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